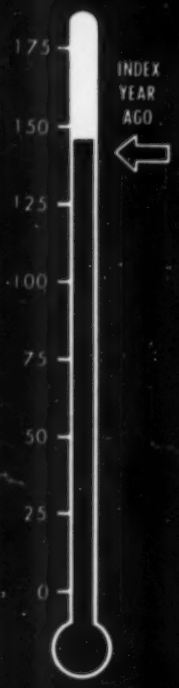
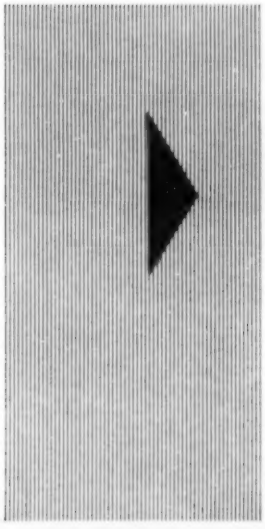
BUSINESS WEEK



The Zestless Consumer



Problem for 1957?

Survey, Page 171

A McGRAW HILL PUBLICATION

OCT. 13, 1956

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"Our vast network of sales outlets and services requires a high speed, modern accounting system. We estimate that National Accounting Machines save us over 100% on our investment annually.

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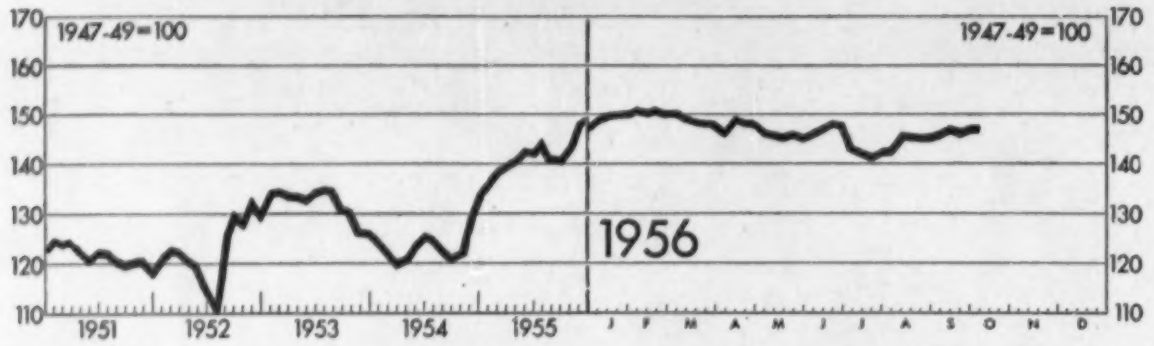
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NUMBER 1415

FIGURES OF THE WEEK



	1946 Average	Year Ago	Month Ago	Week Ago	§ Latest Week
BUSINESS WEEK INDEX (chart)	**91.6**	**140.0**	**146.6**	**†147.6**	***147.7**
PRODUCTION					
Steel ingot (thous. of tons)	1,281	2,330	2,477	†2,506	**2,511**
Automobiles and trucks	62,880	102,196	66,562	†59,092	**81,774**
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.)	$17,083	$62,599	$67,585	$71,985	**$72,724**
Electric power (millions of kilowatt-hours)	4,238	10,639	10,955	11,365	**11,342**
Crude oil and condensate (daily av., thous. of bbls.)	4,751	6,690	7,037	7,044	**7,022**
Bituminous coal (daily av., thous. of tons)	1,745	1,595	1,665	†1,683	**1,743**
Paperboard (tons)	167,269	289,693	202,337	271,570	**280,809**
TRADE					
Carloadings: miscellaneous and l.c.l. (daily av., thous. of cars)	82	78	75	77	**78**
Carloadings: all others (daily av., thous. of cars)	53	59	56	61	**61**
Department store sales (change from same wk of preceding year)	+30%	+15%	+2%	+8%	**+3%**
Business failures (Dun & Bradstreet, number)	22	207	196	251	**253**
PRICES					
Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100)	311.9	405.6	425.7	423.5	**419.4**
Industrial raw materials, daily index (BLS, 1947-49 = 100)	††73.2	97.3	97.7	98.2	**98.0**
Foodstuffs, daily index (BLS, 1947-49 = 100)	††75.4	79.2	82.5	82.5	**81.4**
Print cloth (spot and nearby, yd.)	17.5¢	19.5¢	18.6¢	18.9¢	**19.3¢**
Finished steel, index (BLS, 1947-49 = 100)	††76.4	154.5	168.6	168.6	**168.6**
Scrap steel composite (Iron Age, ton)	$20.27	$44.83	$58.83	$57.33	**$56.17**
Copper (electrolytic, delivered price, E & M.J, lb.)	14.045¢	43.363¢	39.890¢	39.990¢	**39.915¢**
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	$1.97	$2.15	$2.28	$2.31	**$2.30**
Cotton, daily price (middling, 1 in., 14 designated markets, lb.)	**30.56¢	33.87¢	33.02¢	33.20¢	**33.24¢**
Wool tops (Boston, lb.)	$1.51	$1.72	$1.86	$1.91	**$1.91**
FINANCE					
90 stocks, price index (Standard & Poor's)	135.7	331.2	377.8	361.2	**368.8**
Medium grade corporate bond yield (Baa issues, Moody's)	3.05%	3.59%	4.03%	4.14%	**4.15%**
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate)	¾-1%	2⅛%	3½%	3½%	**3¾%**
BANKING (Millions of Dollars)					
Demand deposits adjusted, reporting member banks	††45,820	55,860	54,920	†55,374	**54,915**
Total loans and investments, reporting member banks	††71,916	84,616	†85,684	†85,677	**85,655**
Commercial and agricultural loans, reporting member banks	††9,299	25,010	29,355	†29,724	**29,849**
U. S. gov't guaranteed obligations held, reporting member banks	††49,879	30,282	26,501	26,096	**25,979**
Total federal reserve credit outstanding	23,888	25,525	25,454	25,694	**25,593**

MONTHLY FIGURES OF THE WEEK		1946 Average	Year Ago	Month Ago	Latest Month
Wholesale prices (U. S. Dept. of Labor BLS, 1947-49 = 100)	**September**	78.7	111.7	114.7	**115.3**
Average weekly earnings in manufacturing	**September**	$43.82	$77.71	$79.60	**$81.00**
Personal income (seasonally adjusted, in billions)	**August**	$178.0	$308.7	$324.3	**$328.2**
Farm income (seasonally adjusted, in billions)	**August**	$16.9	$14.9	$14.9	**$15.2**
Wholesalers' inventories (seasonally adjusted, in billions)	**August**	$5.5	$11.9	$12.8	**$12.8**
Retailers' inventories (seasonally adjusted, in billions)	**August**	$9.8	$23.4	$23.8	**$23.8**
Retail sales (seasonally adjusted, in millions)	**August**	$8,541	$15,662	$16,019	**$16,249**

* *Preliminary, week ended Oct. 6, 1956.*
† *Revised.*
†† *Estimate.*
** *Ten designated markets, middling ⅛ in.*
§ *Date for 'Latest Week' on each series on request.*

THE PICTURES—Aerojet-General Corp.—77; American Broadcasting Co.—32 (top); George J. Butler—116 (bot.); Columbia Broadcasting System, Inc.—32 (bot.); Grant Compton—125, 126, 127, 128, 129, 130, 131; French Embassy Press & Information Division—144, 145; Herb Kratovil—116 (top), 132, 134, 136, 138, 140; Masters, Inc.—176; Mittet Foto, Oslo—152; National Broadcasting Co. Inc.—32 (cen.); National Co., Inc.—74 (bot.); Ransdell Inc.—43; Mike Shea—28, 29, 30 (bot. lt.); Smith-Corona, Inc.—74 (top); U.P.—25 (cen. 2 & bot. lt.); Vertol Aircraft Co.—188-9; W.W.—25 (top rt. & bot. rt.)

B.F.Goodrich



Pecans by the ton travel on B. F. Goodrich belts

A typical example of B. F. Goodrich product improvement

THREE tons of shelled pecan meats a day flow through this plant—twice as much in peak seasons. But belts were being replaced every four to six months.

Keeping them clean took time and money. Oil from the nuts soaked into the belts. Some belts got soft and sticky. Others hardened and cracked. All kinds of belts from many manufacturers were tried.

Then a B. F. Goodrich distributor heard about the problem. He recommended B. F. Goodrich belts made of Koroseal flexible material, and the trouble disappeared like magic. B. F. Goodrich had developed a belt that stands nut meat oils, cooking oils, animal fats, most acids and just about everything else that ruins belts. The belts are as clean as your dishes at home and just as easy to wash. They have no odor, no taste, never get rancid. Food particles, even shells, can't grind in. In the pecan plant these belts had already lasted 50% longer than any others when this picture was taken, and still looked good for years of service.

Other kinds of B. F. Goodrich belts handle iron ore, coal or rocks instead of pecan meats. B. F. Goodrich has also made improvements in those longer, heavier belts to make them last longer, save money for users. B. F. Goodrich has made improvements in V belts, in dozens of kinds of hose and just about every other kind of industrial rubber product. If you use any kind of rubber, call your B. F. Goodrich distributor. Let him tell you which B. F. Goodrich product will do your job best. Or write *B. F. Goodrich Industrial Products Company, Dept. M-770, Akron 18, Ohio.*

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EDITORS REPORT

Dear Reader:

Our colleagues on the business-advertising side of BUSINESS WEEK have provided us with some interesting news. At least, we editors found it so. We want to share it because it is all about you, our readers. Here, in capsule form, is what was learned from a questionnaire survey of 10,000 subscribers that gives a sort of economic profile of a BUSINESS WEEK reader:

Age—Of all our readers, 62% are over 40. However, a fairly high percentage, some 30%, were in the 31-40 age bracket.

Education—They are predominantly college men; 71% attended college and 51% wound up winning their sheepskins. Twenty-one percent of them went on to graduate school, and 13% earned advanced degrees.

Business—Fifty-seven percent are with companies whose annual sales exceed $1.5-million, while 20% report their companies have sales of over $50-million a year. About one out of five—23%—are officers or directors of at least one other company.

Income & Investments—Average annual income of our readers is $19,963. Net worth average is $121,994—approximately six times annual income. On the average, $75,705 is tucked away in stocks, $17,982 in bonds, and $54,570 in real estate (other than home). An average of $38,321 in life insurance is carried, of which $14,931 is in group policies.

Homes—Eighty-two percent of our readers own their own homes, and the current resale value averages $22,700. A sixth of them own a second home. Of these, 56% are summer houses, 35% farms.

Autos—Only 3% of all our readers do not own cars; and 40% of those who do, own two cars; and 5% own three or more.

Hobbies—Gardening (45%) leads all others, with golf (44%), fishing (44%), home workshop (32%), and hunting (22%) also very popular. On the average, our reader spends $458 a year on his sports or hobbies.

Activities—Forty-seven percent belong to civic clubs, 35% to luncheon clubs, and 20% to college clubs, while 40% are members of country clubs and 6% belong to yacht clubs.

Interesting people, we thought—especially since they all read BUSINESS WEEK.

THE EDITORS

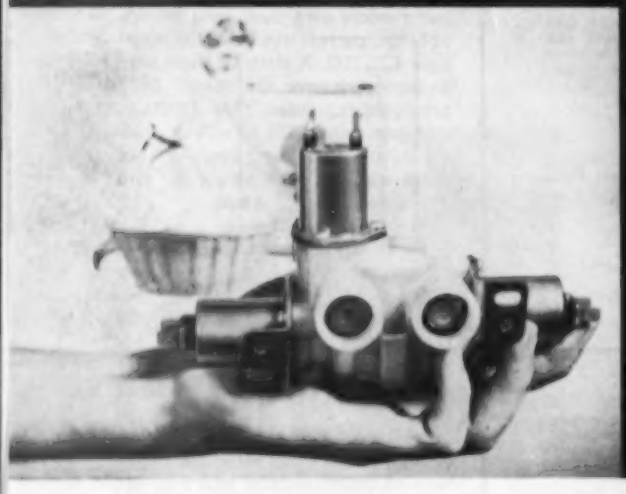
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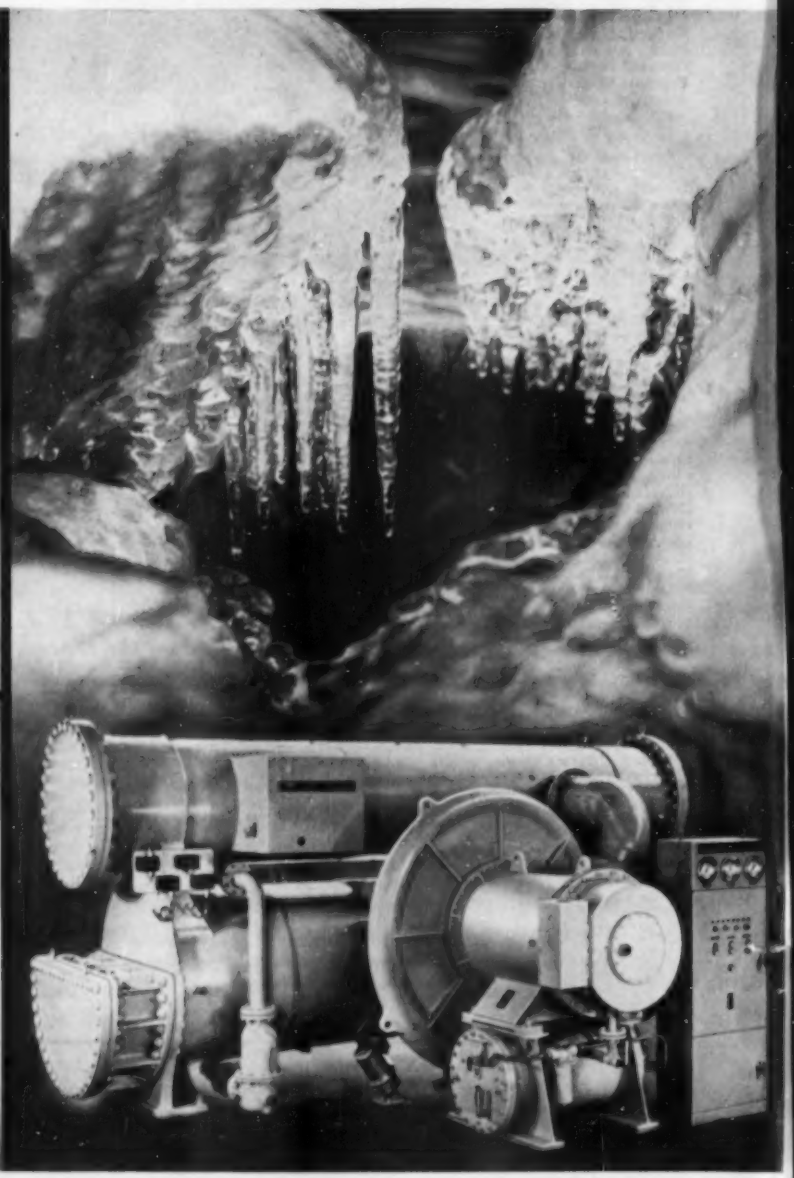
ALWAYS SEEKING WAYS TO SERVE YOU BETTER



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By DAN HAUGHTON
Vice President and General Manager
Georgia Division,
Lockheed Aircraft Corporation

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We are manufacturing America's first production prop-jets — USAF C-130 Hercules transports — and the first operational units will be delivered this winter to the Tactical Air Command's 18th Air Force.

We have moved all of Lockheed's nuclear-powered aircraft design study work to Georgia, and we are building a nuclear research laboratory here for the Air Force. Both the Air Force and Lockheed plan additional expansions in engineering and manufacturing facilities.



. . . We like the enthusiasm and will-to-do of Georgians



. . . Residential sections of cities are attractive, homes and grounds are well kept . . .



. . . Atlanta is the Southeastern center for medicine, science, communications and transportation — with the busiest non-international airport in the nation.



. . . People are religious . . . Churches are numerous, well supported and well attended.



. . . Schools are modern. Per capita expenditure for education is among the highest in the nation . . . Sixteen colleges and graduate schools are in Atlanta alone.



. . . Georgia abounds in recreational facilities: water sports, fishing, hunting and spectator games.

. . . Georgia is a well-balanced state in the center of the growing southeast, offering friendship and a challenge to industry, engineers and scientists . . . a good state in which to live and do business.

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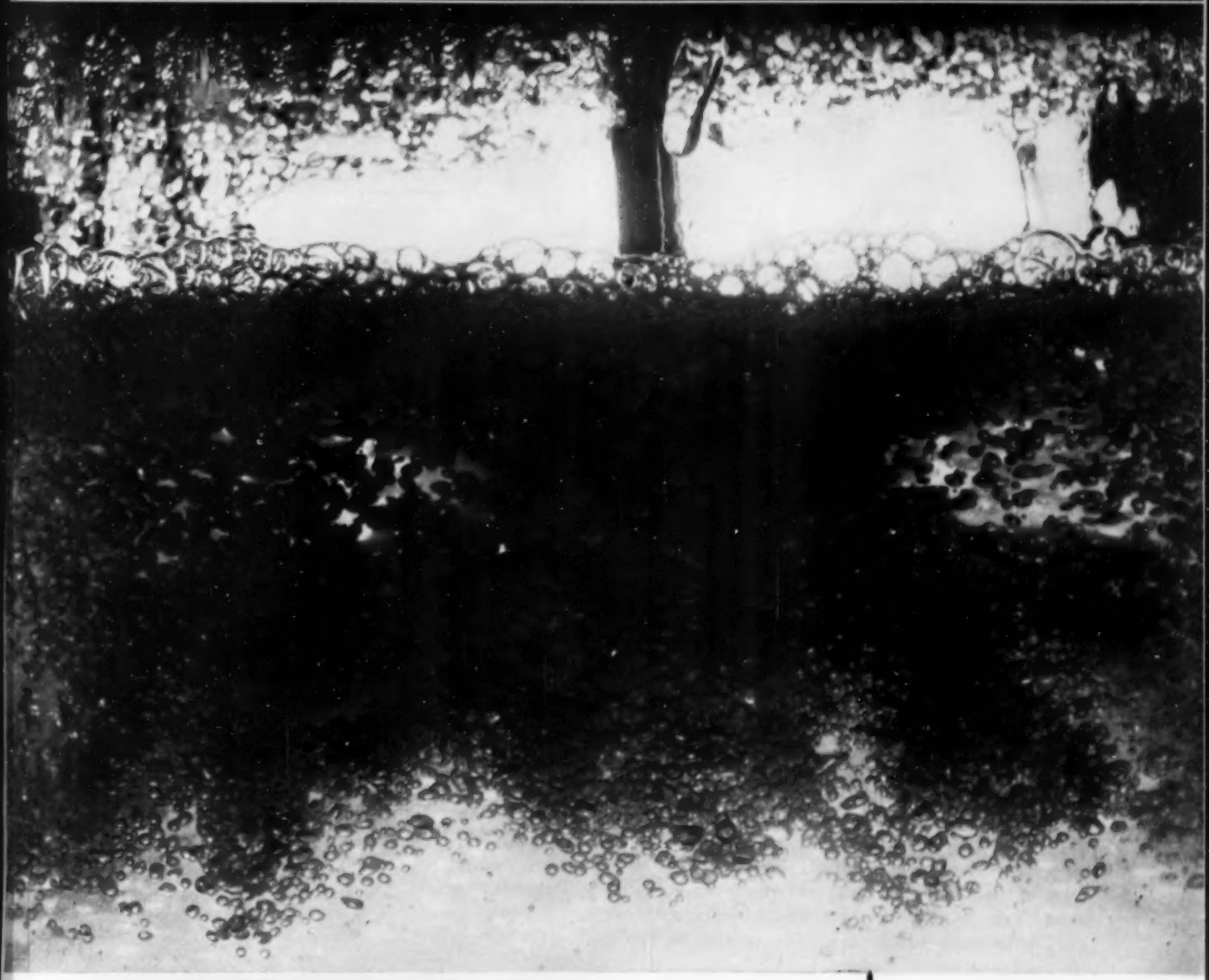
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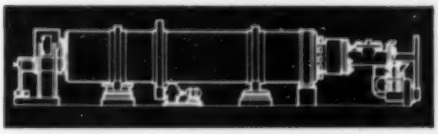
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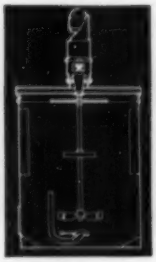
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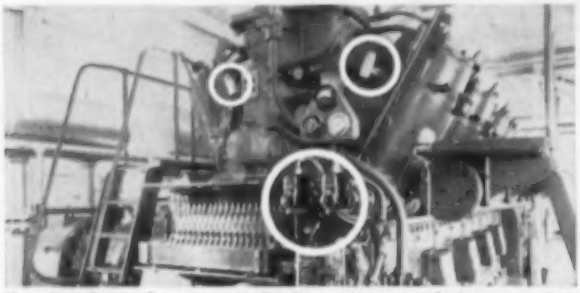
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At Thule, Greenland, 900 miles from the pole, thirty Ingersoll-Rand diesels with Bendix fuel injection generate all electric power for this U. S. Air Force base.



Sun Oil Company reports greatly reduced maintenance costs since installing Bendix magnetos and coils (circled) at Marcus Hook refinery.



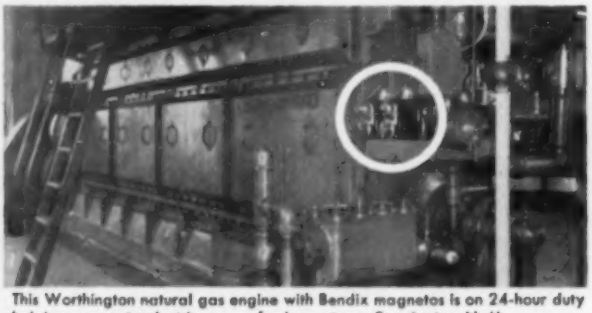
This giant Cooper-Bessemer with Bendix magnetos and high-output coils is used in the oil fields at a pipeline station where dependability is so important.



Sixteen-year-old dredge "Port Arthur" reports 75 percent savings since installation of new Nordberg Diesel with Bendix fuel-injection equipment.



Dozens of shortline railroads using 75- and 90-ton General Electric road switchers with Cooper-Bessemer engines also endorse Bendix diesel injection.



This Worthington natural gas engine with Bendix magnetos is on 24-hour duty helping generate electric power for boom-town, Farmington, N. M.

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Above are six different jobs done by industrial engines—a small sample of countless rugged, essential tasks these work horses perform around the clock. Two Bendix contributions to this field are magnetos and coils for all types of spark-ignited engines and fuel-injection equipment for diesels. Whichever type engines you use, specify this Bendix equipment because of its cost-cutting ability and outstanding reliability.

Both products are made by Bendix Scintilla Division, Sidney, N. Y. Scintilla is the world's foremost producer of ignition systems for all types of aircraft; makes other magnetos for small industrial engines, outboard motors, power mowers, etc.; offers a wide range of quality electrical connectors in regular and pygmy sizes for many uses; builds ground and airborne ignition analyzers and many other products.

For the story of all twenty-five Bendix divisions, what they make, and how they serve many industries, write for the brochure "Bendix and Your Business".

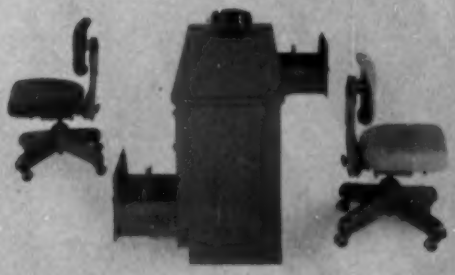
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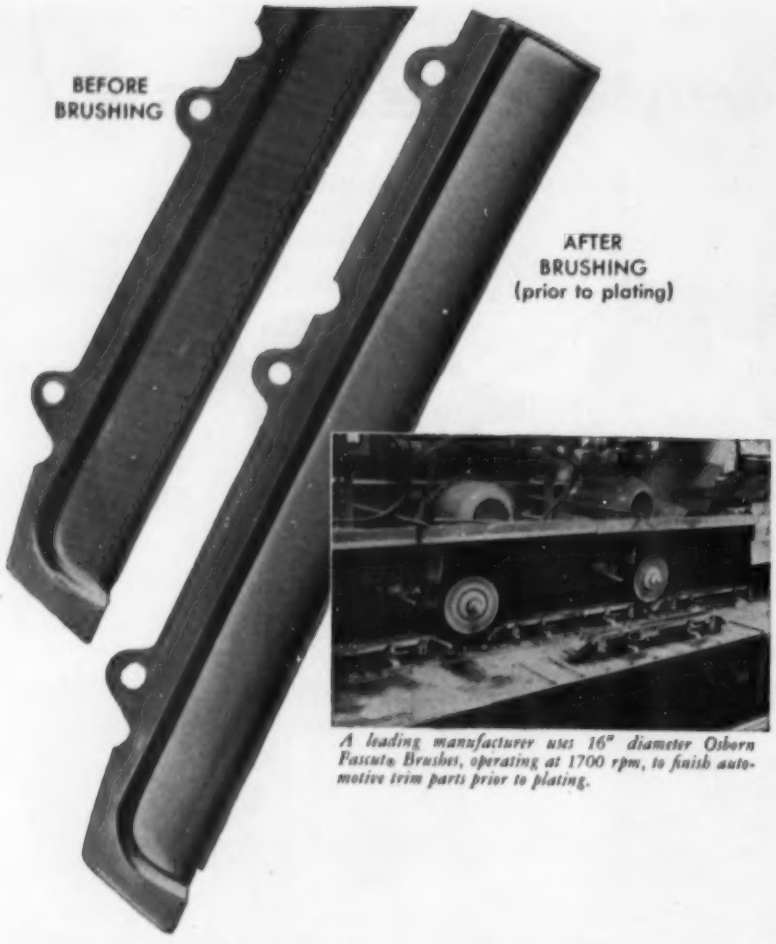
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READERS REPORT

The Step Between

Dear Sir:

In connection with your discussion on repairs and improvements to the home under FHA Title I [BW—Sep.8'56,p186] you mentioned that if a person should borrow $1,000 for three years the total cost would come to $130.28.

Lending institutions making loans under this program are furnished rate charts by the Federal Housing Administration and for a person to borrow $1,000 for three years, he would repay a total of $1,149.80. Therefore the actual cost to the individual would be $149.80. However, in connection with the repayment of this amount, the lending institution shall pay to the Commissioner an insurance charge equal to $^{65}/_{100}$ of 1% per annum of the net proceeds of the loan. On $1,000 this would amount to $19.50 for the three-year period. Subtracting $19.50 from the $149.80 would leave a balance of $130.30, the approximate amount you mentioned.

This is called to your attention since it could become most confusing to a customer in approaching a lending institution to make arrangements for a loan of this type. In other words, we would tell a customer that he would repay a total of $1,149.80 and your comments might infer that we are in error.

R. G. HORMELL
ASST. CASHIER AND MANAGER
INSTALMENT CREDIT DEPT.
THE INDIANA NATIONAL BANK
INDIANAPOLIS, IND.

"With Raised Eyebrow"

Dear Sir:

Hooray: for Edmund W. Lowe [BW—Sep.15'56,p10]. Certainly parents and businessmen, alike, are viewing the present school curriculum and the methods used in teaching the students of today with a second look, complete with raised eyebrow.

Somebody . . . or still, everybody . . . should campaign for an up-to-date revision of the subjects taught in our public schools in an effort to give our young people a more practical basis for their future and the future of our country which they will one day control.

I might rearrange the order of the suggestions Reader Lowe makes in his letter, however. It seems to me the most neglected topic is the

Business Protection Unlimited . . .



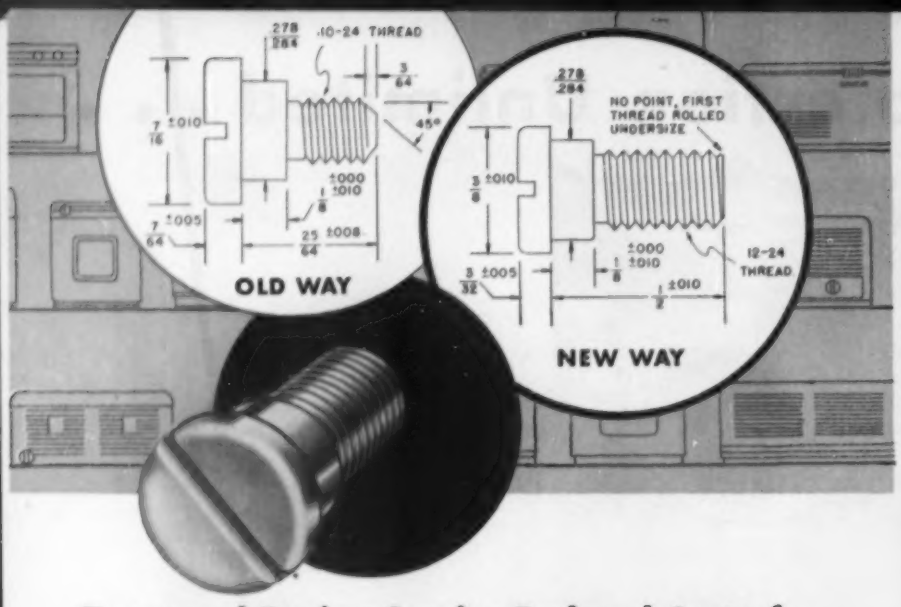
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The two parts shown above demonstrate how Townsend engineers saved an appliance manufacturer $5.00 per thousand by redesigning a special fastener so that it could be produced by cold-forming. By redesigning this part a costly machining operation was eliminated.

The shouldered screw at left, above, an integral part of a major appliance, was originally produced by another method at a cost of about $10.00 per thousand. Townsend engineers applied their extensive knowledge of cold-forming techniques to the problem and by slightly changing the design found that the part could be produced for about $5.00 per thousand—a clear savings of 50% on a part used in great volume. The new part shown at right provides just as efficient a fastener as the old.

This is a typical example of how the Townsend Technical Sales Department can help you in your efforts to improve your products and reduce assembly costs. These men can serve you in several ways—they will act as fastening consultants to your design and production engineers—they will design special parts or recommend the best standard fasteners. They often study an entire assembly procedure and suggest improved techniques.

The Technical Sales Department has back of it a company with nearly a century and a half of wire drawing and cold-forming experience. Townsend regularly produces more than 10,000 standard and special parts and fasteners—has the capacity to manufacture more than 60-million pieces a day.

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one he lists in the paragraph . . . good old-fashioned "Ethics." Even the national highway death rate might be lowered by even a basic understanding of the effects of various kinds of behavior and individual conduct in relation to other people and their rights and privileges.

ETHEL JEAN WALL
STENOGRAPHER FOR CHIEF CLERK
ORDER OF RAILWAY CONDUCTORS & BRAKEMEN
CEDAR RAPIDS, IOWA

"Welcome Chuckle"

Dear Sir:

Your story on the auto rental industry [BW—Sep.29'56,p192] rates an enthusiastic "well done." It was an excellent bit of reporting that reflects perceptive research and leg-work.

I think your story has captured the vitality of a new and expanding industry where the competition of Avis vs. Hertz is bringing new potential to the established transportation systems. We are making it possible for the airlines, railroads and bus lines to use the rental auto to compete effectively for the intercity traffic going by private automobile.

For we businessmen who sometimes tend to take ourselves too seriously, the article brought a welcome chuckle.

WILLIAM M. TETRICK
PRESIDENT
AVIS RENT-A-CAR SYSTEM
BOSTON, MASS.

Puerto Rico's Position

Dear Sir:

To a Puerto Rican it is always pleasing to see a story about his homeland, especially in a publication he admires. I enjoyed your article, Puerto Rico Goes Industrial [BW—Sep.22'56,p81] but I would like to point out one small error because I know you would wish to avoid making it in the future.

Your story says "Since the Spanish-American War, the island has been a possession of the United States. But since 1930, it has had the unique status of 'Commonwealth'." The facts are that Puerto Rico did not assume Commonwealth status until 1952, and it then ceased to be a possession or territory of the U. S. It has been recognized by the U. S. government and the United Nations as a free associated state with a common citizenship, currency, and constitution.

ALICIA HERNANDEZ SUAREZ
SAN JUAN, PUERTO RICO



When shipping was slow how the boss used to roar
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Whether you're sending or receiving, whether your shipment is big or small, whether you're shipping here or abroad—always specify Railway Express. You'll find it makes the big difference in speed, economy, and safe, sure delivery. And now you can make fast, economical shipments via Railway Express Agency's new international air and surface connections. It's the complete shipping service, free enterprise at its best.



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For more than twenty years more stationary Diesel horsepower in the United States has been lubricated with Texaco than with any other brand.

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INDUSTRIAL LUBRICANTS

BUSINESS OUTLOOK



Business has broken out of its "straight-line recession." Now the curve is pointing up, at least for the next several months (even though you'd never guess it from the stock market, page 23).

• **Physical volume of production** is only very slightly below last winter's peak; it should set new highs between now and March.

• **Dollar value** of everything sold (services as well as goods) has been rising all the while. Here, of course, prices are a factor.

Value of gross national production in this year's third quarter now is estimated at $414-billion. That's **a gain of about $17-billion** in 12 months, or slightly better than 4%.

In the same period, **prices of manufactured goods** (other than processed foods) have risen by almost exactly the same percentage.

Not all prices have gone up that much, to be sure. Yet **fully half the rise in GNP must be ascribed to price increases.**

Production, in physical terms rather than dollars, has **varied remarkably little** in recent months except for the steel strike period.

Industries that were taking their lumps have nearly been balanced by those still moving forward. And now autos will be coming back to do nearly as well as they were doing a year ago.

Fourth-quarter output should match—may even top—a year ago.

Steel now is turning in a stellar production performance.

Output this week is expected to better 2½-million tons (for the second week in a row), two percentage points above rated capacity. At this rate, October will pass March's 10,925,000-ton record.

—•—

Worries over inventories, to the extent that any doubts still may linger, now must be transferred **from hardgoods to soft.**

We've had a drop of $1.6-billion since May on the hardgoods side.

But, in that same period, **softgoods inventories have grown by $1-billion.** And 60% of the rise has been at the manufacturing level—**goods produced for which wholesalers and retailers haven't called.**

Much of the recent decline in hardgoods inventory, as you might expect, was at the retail level. That, of course, more than anything reflects the laborious but successful **clean-up of the 1956 autos.**

More significantly, manufacturers have chewed about $400-million out of their stocks, reversing the long-ominous uptrend.

Metalworking lines, in particular, have been eating off the shelf. This helps explain why the users of metals, lavish borrowers earlier this year, have been paying back bank loans quite generally.

Inventory liquidation still would seem to be a factor in the **none-too-sprightly market for nonferrous metals.** Stocks had been built as a hedge against strikes and price increases that didn't materialize.

Even more than in New York, London prices for copper, lead, and zinc this week seemed vulnerable. But there was shading in the U.S., too.

—•—

Consumers certainly are well heeled financially to clear the warehouses of excess inventories—even though their buying plans may not indicate any immediate intention to do so (page 171).

The latest estimate of **personal income**, released by the Commerce Dept. this week, shows a **new high** of $328-billion (at an annual rate).

This is $19½-billion better than a year ago. Also, it resumes the march of new monthly records interrupted by the steel strike.

Wage-and-salary incomes made the big gain in August, as was to be anticipated. Not only were the steelworkers back on payrolls, but the "new round" of pay increases began to make itself felt.

But there is another class also doing very well, incomewise, this year. **Personal receipts from interest and dividends** are running $2.8-billion a year ahead of 1955. This is a gain of better than 10%, but the margin may shrink if tight money puts a crimp in "Christmas dividends."

—•—

New trends are cropping up in construction that may bear watching:

• Outlays on **office buildings** are soaring. The value of work put in place on offices and warehouses now tops a year ago by about 25%.

• Gains for **industrial construction** will taper off. That doesn't mean any decline in totals, just that the comparison is with rocketing figures a year ago. Now we're limited by manpower and steel.

• The boom in **stores, restaurants,** and similar structures seems to have passed its peak. Running ahead by 30% to 40% early this year, the comparison with 1955 now has turned minus.

Perhaps the slowdown in the housing boom has resulted in somewhat **less need for sustaining services** like stores and restaurants. Probably, too, these structures have trouble competing with industrial builders for a few necessary materials.

In any event, the joint Labor-Commerce Dept. figures list the store-restaurant-garage category as down 9% in August, 19% in September.

Home building now is competing with slightly less formidable figures for year-ago months. Thus the September shortfall was only 9% against an average decline of 12% through the summer.

But that doesn't signal any housing upturn. Builders still appear gun shy; price tags as well as mortgage terms seem factors.

Many manufacturers saw their **costs of production** go up another notch this week when **soft coal** was advanced 40¢ a ton to compensate for the wage boost just granted the miners.

What's more, there will be another (though smaller) price rise next April when the second installment of the pay increase takes effect.

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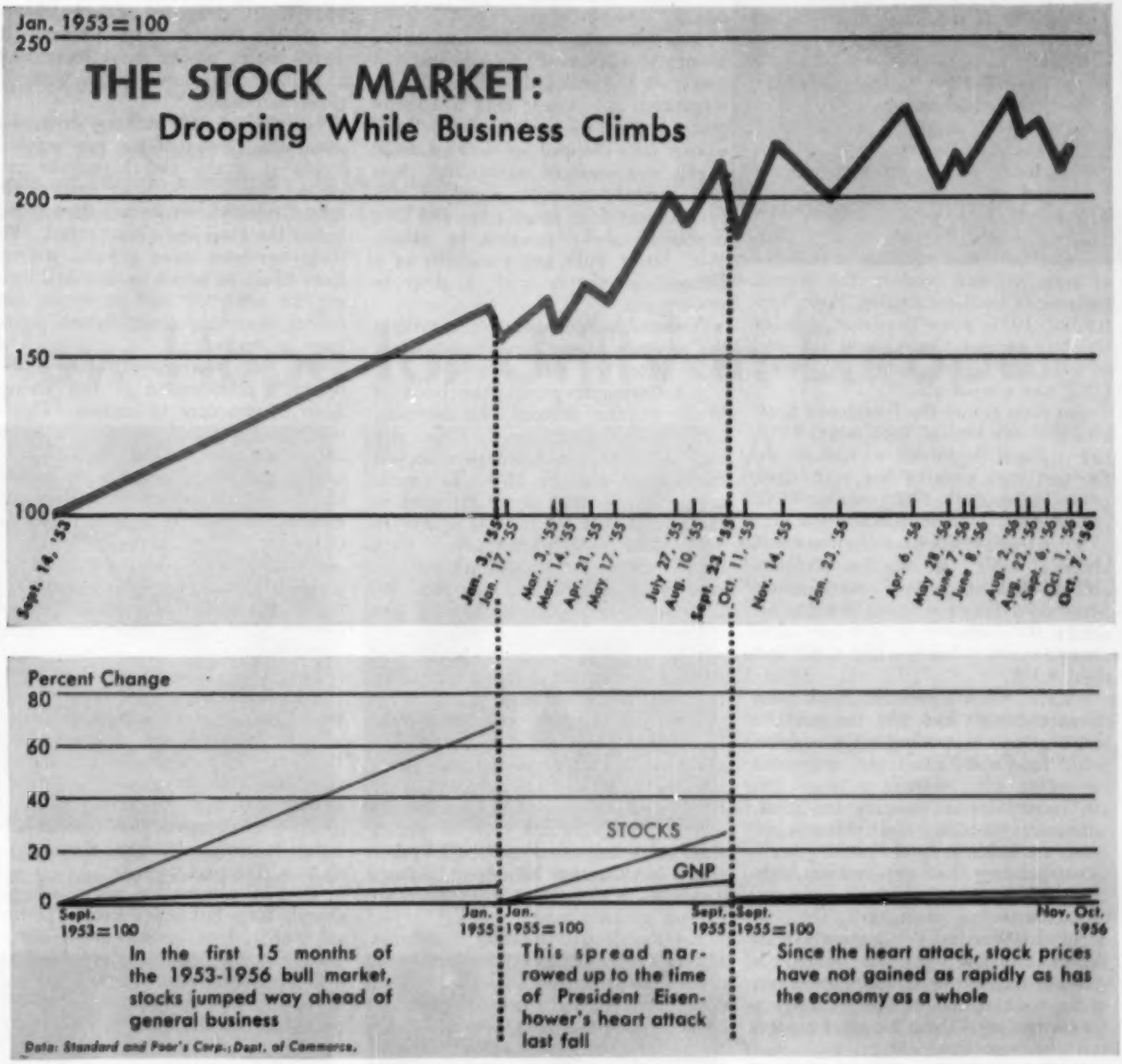
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BUSINESS WEEK

OCTOBER 13, 1956

NUMBER 1415



How Threatening Is This Market?

At a time when general business has never been better, the brawniest bull market in history has lapsed into a confused squiggle on the charts (above).

In perspective, it is now clear that the market has been getting nowhere since the eve of Pres. Eisenhower's heart attack a year ago. Since then, it has frothed up to a peak in the indexes last August but has now returned to just about its year-ago level. When a market can't hold any of its gains over an entire year, there's bound to be a serious question as to whether it is still a bull market.

That brings up two questions on Wall Street and Main Street alike:

- Will the market turn truly bearish or will it merely coast as it did in 1951-53?
- What does it mean anyway for business in general?

• A Puzzle to Solve—The stock market is often cited as a barometer of general business conditions. By definition, stock prices are supposed to reflect investors' views of business prospects, specifically for earnings and dividends. But there are all shades of opinion about interpreting this composite view.

There are times when the market indicates what's ahead for business, and to some extent determines it. There are times when the market merely re-

flects today's business situation or, at most, the prospects for a few months ahead. And sometimes it may not even do that.

How could the market stagger while business is still operating at peak levels? The answer is entwined in a thicket of facts and fancies, but two points stand out:

• For whatever reason, the stock market has often diverged from the trend of the economy as a whole.

• The worst worries of the stock market today are not those of business in general.

• **Business Trends**—As the charts on page 23 show, the stock market until recently has been running well ahead of gross national product, the over-all measure of business activity. From September, 1953, when the latest stage of the bull market began, until the end of 1954, stock prices soared 68% while GNP rose a scant 5%.

But even before the President's heart attack at the end of September, 1955, the gap was beginning to narrow. In the first nine months last year, stock prices advanced 27% while GNP gained 8%.

Since then, stocks have often run well ahead of GNP, but they haven't been able to hold their lead. As a result, Standard & Poor's index of 50 industrial stocks stood this week a scant 2.2% above Sept. 23, 1955, while GNP had risen 4.3%.

Clearly, what halted the stock price advance doesn't look like the market's fear of what's happening in the business world right now. Plant and equipment expenditures are running at record levels, inventories are in tidy condition, consumer spending and personal income are holding up well, and government spending of all sorts remains high. Obviously, investors should have no quarrel with this situation.

• **Special Worries**—What most worries the stock market right now, though, is a trio of factors that affect business but so far nothing like as sharply as they hit the market. These are tight money, the Suez crisis, and politics.

Wall Streeters agree that the Federal Reserve's money squeeze has hurt stocks in three obvious ways:

• It has neutralized an inflationary bias that might otherwise have been expected to boost stock prices, inasmuch as stocks are traditionally regarded as a snug harbor from the force of inflation.

• It has boosted the yields on alternative investments, notably corporate and tax-exempt bonds, to such attractive levels that some money is being directed to them rather than to stocks.

• It has raised the fear that the squeeze will be carried to the point where it will bring a downturn in business. Traditionally, tight money heralds the end of a boom.

The other two hobgoblins of the market don't have quite the same visible effect, but they hit hard at that all-important intangible—investor confidence.

The Suez crisis arouses uncertainty about Middle East peace. And, of course, it has struck directly at the international oil shares, long a favorite group in the bull market. The political worries have cropped up more recently, largely as a result of surveys that show Pres. Eisenhower with a smaller lead than expected in many areas and in a downright shaky position in others. Wall Street links any possibility of a Democratic victory with a drop in stock prices.

• **Vulnerable Spots**—Moreover, even in the generally strong business situation, Wall Street sees soft spots:

• Corporate profits, the heart of Wall Street's interest in business, aren't growing anything like the way they did last year, when they topped the previous year by 24%. This year, on the whole, they aren't expected to exceed last year by more than 2% to 5%. Most pertinent right now, third quarter profits probably won't put any new steam into the stock market. Indeed, hurt by a combination of the auto model changeover and a steel strike, the figures could be droopy enough, on a year-to-year comparison, to put further pressure on prices.

• This suggests that dividends, too, will fall far short of last year's gain. However, the payout may actually be a little larger. Standard & Poor's staff estimates that corporations may pay stockholders 57% of profits this year, compared with 53% last year, but there may be a flood of stock dividends as companies strive to retain cash as working capital.

• Residential housing continues to run behind last year, and commercial building also shows signs of a downturn here and there. These types of construction gave a powerful push to the business—and stock market—boom in its earlier stages.

• The auto industry is the big question mark in a consumer spending picture that is still comfortable but bears watching (page 17). Wall Street's wariness is doubtless weighted by this year's mediocre showing of auto sales—compared with 1955. But Streeters, like the auto dealers themselves, want to see the color of the consumer's cash before they predict another booming year for autos.

• **Market Quirks**—All of these uncertainties have a magnified effect on the stock market, more than on business in general. That's because of the market's own make-up and its own recent performances.

Technically, the figures that make up the market's anatomy are not too painful. S&P's index group of 50 industrial stocks are selling at 13.02 times earnings (coincidentally, the precise figure at which this ratio stood at the 1929 high), compared with 12.93 just before the President's heart attack. In 1946, before profits shook loose from a wartime economy, prices were 23 times earnings.

Likewise, there's nothing sensational about the closing of the gap between yields of stocks and high-grade corporate bonds. In cold figures, the spread is only a shade less than it was before the President's heart attack. Yet there has been some genuine shifting from stocks to bonds by investors looking for safety as well as return and feeling uncertain about future capital gains in stocks.

The most worrisome feature of the market's performance is this change from effervescence to caution. This is tricky, because the market is a mechanism with a built-in feedback: Investors get jumpy when prices behave badly, and their own jumpiness contributes in turn to further price declines.

• **Worse Than Average**—Another depressing fact about today's market is this: The market as a whole has performed even more feebly than the indexes show.

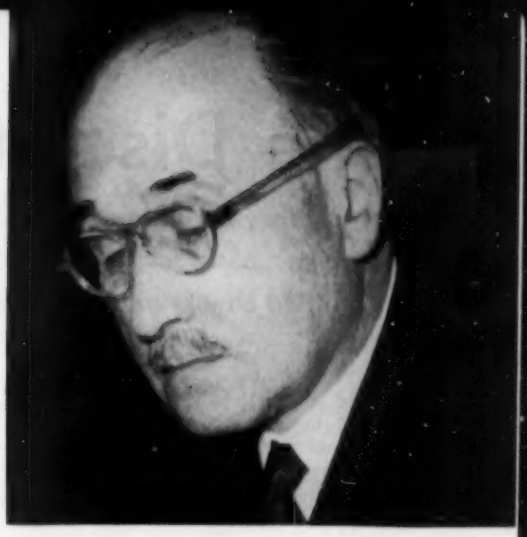
Last year, 73% of the more than 1,000 common issues listed on the Big Board showed some sort of price gain over the previous year's close. So far this year, 56% of the issues actually show losses from yearend, with some prices cut in half. Thus, less than half of the over-all market has been able to hold its own, although the indexes show a slim plus sign.

Trading volume has also slackened sharply from last year's levels. Technical analysts have been pointing out all along that the drop in volume has been a loss of "upside momentum." Translation: Volume has shrunk most when prices were rising, has expanded most when prices dipped.

The price slumps of last May and again in August-September came, the analysts say, from a shortage of buyers rather than any large-scale liquidations from portfolios.

• **Prophecies**—Whether or not the stock market is a true barometer of business weather, and regardless of international and domestic politics, Wall Streeters themselves increasingly agree on one prediction: that both the market and the economy are going to be pretty much as in 1951-53.

We could be in for a mild recession late next year, they argue, and the market is already beginning to behave on that assumption, discounting a future decline in corporate earnings.



Jean Monnet (right) is France's leading "European." He was author and first boss of the Coal and Steel Community. Now he heads an "action committee" to build support for a Common Market and Euratom.

New Hope for Unity in Europe



BELGIAN Foreign Minister Paul Henri Spaak has been Monnet's constant ally. He speaks for Benelux.



WEST GERMAN Chancellor Konrad Adenauer fought for the coal-steel pool, now wants wider ecomonic, political unity.



BRITISH Chancellor of the Exchequer Harold Macmillan will back free trade with Europe if Common Market goes through.



FRENCH Premier Guy Mollet is working closely with Adenauer, will try to push protectionist France into Common Market.

As soon as they can get clear of the United Nation's debate on Suez (page 165)—perhaps early next week—the foreign ministers of six nations will begin a historic session in Paris. The nations are the six members of the European Coal and Steel Community—West Germany, France, Italy, Belgium, Holland, and Luxembourg. Behind their discussions will be the first real possibility of a United States of Western Europe.

On the agenda of "The Six" are two key pieces in the new framework of European unity that is now taking shape across the Atlantic (BW—Sep.29'56,-p34). One is Euratom, the proposed nuclear energy pool. The other is the Common Market, or six-nation customs union. If the foreign ministers can agree next week, you will see a Euratom treaty and a Common Market treaty ready for signature by early next year. There are some tough issues still to be resolved, however. West Germany might hold out on Euratom, France on the Common Market.

• **Road to Free Trade**—Beyond that lies the possibility of a free trade area for all Western Europe—with Britain attached to the Common Market via a free trade zone. The Eden government has about decided to hitch its star to a policy of free trade with Europe. And with the economic ball rolling, you are sure to get important new moves toward political integration.

The leaders of Europe's Big Three—Britain, West Germany, and France—now are convinced that Europe can't survive if it stays divided into small sovereign states. But if Europe had a mass market of 250-million people and some federal political institutions, they think it might be able to hold its own in the world.

The Discontented: Real Target of

They're the ones whose votes can be shifted—but this year the politicians find a prosperity-style discontent that's unlikely to benefit any one party.

Sociologist David Reisman once defined the art of the political campaigner as the mobilization of discontent. The job of any politician looking for votes is to find people who are discontented, and somehow convince them that he has an answer to their discontents.

That's clearly true of the politician on the outside—this year, that means Adlai Stevenson and his advisers, and this year they are calling prosperity uneven, lopsided, and incomplete. Basically it's just as true that the man or party seeking reelection must aim the campaign at the discontented; they are the people whose votes can be influenced, can be shifted.

In 1956, with the country at its most prosperous level ever, where does a politician find discontent? There are obvious places to look—some farm areas, local pockets of unemployment, and the like. But even apart from these special situations, a prosperous country can have its own brand of discontentment. This week BUSINESS WEEK reporters went looking for it through the booming industrial centers and swelling suburbs.

• **Key**—The discontented, it appears, have one feeling in common. It is much like that of the greyhound who pursues but never catches the mechanical rabbit at the race course. The faster they go, the more money they earn—and yet, so they say, they find themselves in the same position in relation to their goal.

More often than not, the discontented concede that their living standards are higher. They have new—or at least different, bigger, better equipped—houses than a few years back, more appliances, newer automobiles, and more children.



In 1956, where does a politician look for discontent?

But discontent is born of such things as bucking the weight of mortgages that hang over home and automobile, giving up regular nights out, not having a woman in to do the ironing, or seeing the bank account stagnate while the paycheck fattens.

In the business community, medium and small operators gripe most about tight money that threatens their growth, about a tax structure that they feel gives a break to big business, about competition of chain stores.

• **Where It Shows**—As half-owner of a San Francisco bar, Melvin Tate serves



"In this bar business, you can get a pretty good gauge of prosperity."

up potables and finds the mood of the public tense. "A bar," he says, "is a pretty good place to judge prosperity. When people are better off, or even when they're on the way to saving a few dollars, they're more relaxed. They'll get out and spend a few of those dollars in a bar."

Halfway across the country in Kansas City, a similar reaction comes from pharmacist Dick Armbruster, who has given up on his neighborhood drug store to work for a chain. "It's back to the point where people go to the big 'supers' to save two or three cents," Armbruster says, remembering the lush postwar years when they didn't mind paying the extra pennies he had to mark up his wares.

• **Running to Stand Still**—In a Toledo suburb, Mrs. Anne Matthews, housewife and mother of five children, asks:



"We could get a lot of enjoyment out of $100,000 at something less than 6%."

"Prosperity? Which way did it go?"

She recalls she used to have her hair done regularly at a beauty shop, and there was a woman to do her ironing. "Those things have all gone out the window," she says, along with a regular evening out with her husband every couple of weeks.

The mortgage on the house in the suburb—a necessity when their family outgrew its smaller home in Toledo a couple of years back—takes a hefty bite out of the paycheck. Property taxes have recently been doubled by a county government that needs more money, too. Mrs. Matthews is disturbed, also, by rising food costs and bigger clothing bills—"Why, I pay at least a dollar more for a pair of children's shoes nowadays."

Mrs. Matthews' husband, an insurance office manager, has had steady advancement in both position and pay. To her, discontentment is "running faster to stay in the same place."

• **Discontent in the TV Age**—But the discontent of 1956 has no face like that put forward by the great economic depression of the 1930s—**raw human misery**, breadlines, tarpaper shacks. The classic discontented American then was on relief, or peddling apples on street corners.

Today's discontented man, in a good many cases, eases economic pangs by holding two jobs, or by allowing his wife to go to work—or both. He can be, and often is, found in a suburban bungalow (one that's crowded with a television antenna and filled with gadgets to make life easier), where he supports a growing family and, most likely, a late-model automobile.

• **$25,000 Poverty**—The head of such

the Political Campaigners

a house is, for example, the Cleveland machinist who pulls the cap off a bottle of beer and allows that, maybe, he rates as a minor capitalist—although he feels poor. This man, one of 12 children of immigrant Slovak parents, earns $2.40 an hour in his machinist job. Besides that, he has a lucrative radio-TV repair business that he attends to during evenings and weekends. His wife works, bringing home an extra $2,000 a year.

The mortgage on his home is down to $3,000. The property itself has increased in value from $12,000 to $15,000 since he bought it four years ago. His 1955 Pontiac, bought new, is paid for, and so is his radio-TV repair equipment. One of his two daughters finished parochial high school last spring and is now employed; the second child is in the eighth grade.

Proudly, this man shows off some new "toys"—a fine shotgun ($180) and a powerful outboard motor.

He agrees that he could probably liquidate tomorrow for $25,000 or thereabouts. A capitalist? "Yeah, I guess maybe so, if you want to figure that way. I don't. All I know is that all the money I have is a $500 nest egg in the bank. I had that much four years ago. That, and because four years of my life have gone over the hill, is the reason I'm discontented."

• **Tight Money Blues**—An energetic young Arizona businessman sounds the eloquent lament of prosperous discontent in a time when money is scarce and costly: "We sure could get a lot of enjoyment out of $100,000 at something less than 6% interest," he says.

His problem: The squeeze that tight money puts on his business, a thriving wholesale supply firm that grosses about $750,000 a year. To realize its growth potential, however, there must be sizable and steady bank credit available at favorable rates for its potential customers, to cover their paper.

As general manager, this man puts in a 70-hour work week. "What with the home I have to maintain and the contacts I must make, together with taxes and living expenses, I should be taking $1,000 a month out of the business," he says. "But I'm not. . . . If I were a bricklayer, I would make $20,000 a year working these hours. But I don't care to lay bricks."

• **Two-Job Standard**—That's the general theme of many another lament, though the particular reason may be different. The complaint isn't that things are bad, but that the price of keeping them good is so high.

There are abundant opportunities, for example, for wives to work—or for energetic husbands to do two jobs. This keeps the wolf from the door, but it doesn't put down discontent.

Consider the case of Stanley Shores of Phoenix, who holds down two jobs and wants to get back into military uniform.

Shores, 36, teaches English and journalism at Phoenix Union High School by day, and works nights as a proofreader on the Arizona Republic. With a wife, six children, a new house, and a 1951 car, Shores calls himself materially better off than four years ago—"But that extra proofreader's salary makes the difference between being comfortable and pressed."

Shores, a reservist, has applied for active Air Force status, as a captain. He figures the captain's pay, with accompanying benefits, would let him maintain his present living standard on one job instead of two.



"If that extra proofreading job didn't pay for the house, I'd be strapped."

• **Machinist and Banker**—In Seattle, there was a kind of depression talk from union machinist Phil Woll, who works for Boeing Airplane Co. He earns $2.61 an hour, and his wife has a job at $2.20 an hour. "To have any of the luxuries of life at all, she had to go to work," Woll says.

His own plight is not critical at the moment, but Woll says "many fellows in the lower pay grades have three or four children. They'd be better off if they went on relief . . . a man with five children would draw approximately $3,000 a year, outside of medical attention."

Executive and laborer, well educated and lesser educated alike are subject to the malady. In Los Angeles, an old-line Republican—a bank loan officer with six years of experience and an academic record of study at the graduate level—feels the pangs. His salary is $380 a month, and he says he would be hard up if it were not for his $60-a-month National Guard captain's pay.

• **Whose Gain?**—In the end, the critical question becomes: Can this sort of discontent be mobilized for the benefit of one political party?

What evidence there is directly to this point suggests that the answer is no.

If their present uneasiness has shaken them off from their basic political faith, most of the subjects give no sign of it. Moreover, few of them seem inclined to identify their discontent directly with the economic course steered by the Eisenhower Administration. At the least, they are loath to criticize Washington at this point.

There is the young Los Angeles salesman, dealing in tires and selling mainly to farm and lumber accounts. Business is bad, but he says he's going to vote for Eisenhower, although he feels a Democratic Administration would be better for farmers—and, therefore, for him personally. His explanation: "I don't feel that the good of the nation in general is represented by Democratic farm policies."

• **Anti**—One standout exception is the case of J. R. Murphy, a Kansas City plasterer. In 1951, he left the labor force to become a plaster contractor. "When the Republicans came into office," Murphy says, "housing starts around here dropped off. . . . I kept at it for a while, managing to trim down estimates and one thing and another to get what jobs I did."

Eventually Murphy's contracting business folded—and he lost his home and automobile with it. Now, in his early 50s, he's back in the labor force as a plasterer, drawing the regular hourly rate. Today, the rate is $3.39-½; in 1951, when he gave it up, it was $3.17-½.

• **Unmoved**—In contrast, there's Story J. Sloane, Jr., of Houston, an oil company lease man. He makes about $6,000 a year and, by his own description, is "strapped" by debt. He's making monthly payments on a $13,000 home in a new subdivision, a 1955 automobile, a deep freeze, and a personal loan he negotiated last December when his fourth child was born.

But politically, his discontent is not volatile: "We have steaks in the deep freeze and we get plenty to eat. I think, over the long run, the Republicans have helped me and everybody else with their economic policies . . . maybe next year they can cut income taxes and maybe even trim a little off the war debt."





Senate Banking Chmn. Fulbright probes bank laws . . . . . with Illinois' ex-Auditor, Orville Hodge (with



CHICAGO'S old Federal Building is scene as Fulbright asks why laws didn't prevent Hodge's crimes.

From a Sordid Tale

The Senate Banking Committee, Democratic Sen. J. William Fulbright at its head, trundled out to Chicago this week to hear a sordid and politically hot tale of forgery, conspiracy, and embezzlement, much of which has already been probed by the courts of Illinois.

The case is politically hot because the man most deeply involved in it is the former Republican State Auditor of Illinois, Orville E. Hodge. Democrats are bound to make what political hay they can out of the scandal, to give Illinois' Republican administration and the state's slate of Republicans for national office as hard a time as possible.

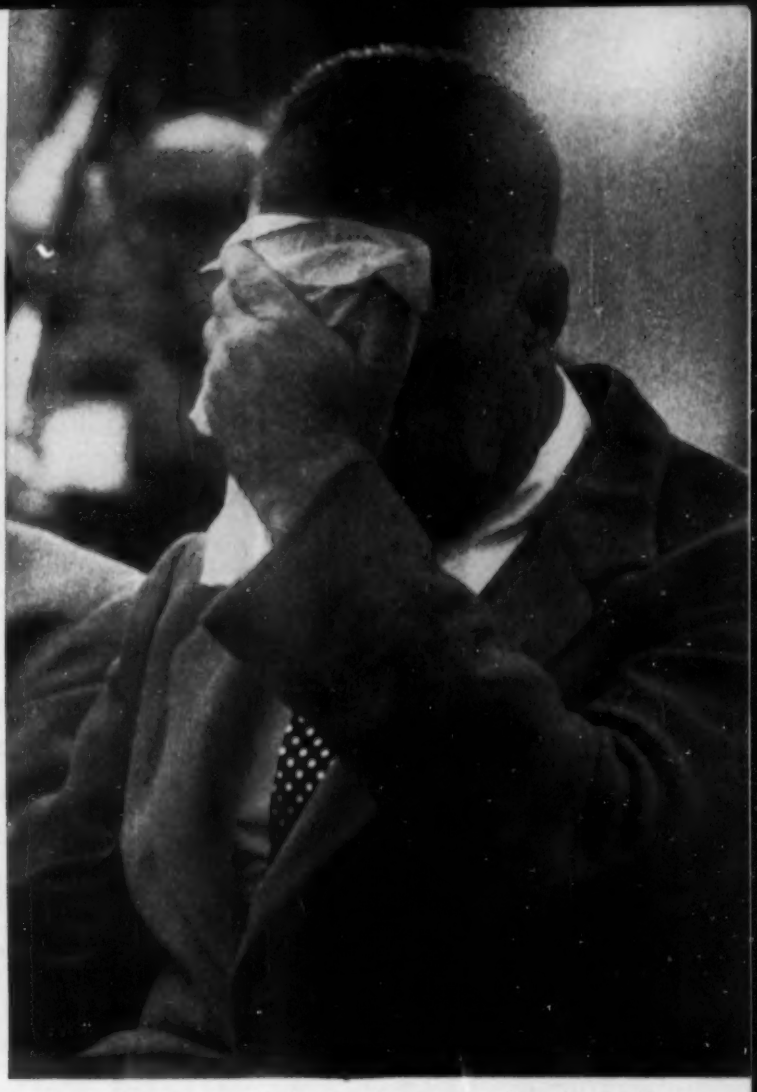
• **Other Side**—But for business, there's a wholly different side to the case. And that's because the scandal puts the spotlight brightly on the operations of the Federal Deposit Insurance Corp., and on banking laws generally. One almost certain result of the Congressional probe is that Congress will investigate FDIC for the first time since that agency was set up in 1933. And it will add fresh impetus to the Congressional attempt to correlate and coordinate the present mish-mash of national banking law.

Just before the last session of Congress closed, the Senate Banking Committee set up a special subcommittee to do this job. Staff work has begun and an advisory committee of bankers has been named, headed by Kenton R. Cravens of Mercantile Trust Co., St. Louis.

Fulbright and his committee began probing the case a month ago. They started in Washington, quizzing FDIC officials. They put the show on the



dotted tie) surrounded by guards . . .



. . . sweating out quizzing on forgery, embezzlement.

Will Come New Laws for Banking

road to get minute details of the case.

For the investigators, the Hodge case is a natural. Hodge was elected State Auditor, an office that combines the role of state banking superintendent with other tasks, in 1952. During his campaign for that job he met Edward Hintz, executive vice-president of Southmoor Bank & Trust Co., of Chicago. The state treasurer was using Southmoor Bank as a depository for state funds. State balances with the bank ran about $2-million.

• **First Moves**—In May, 1955, Hodge made out six warrants in favor of an Illinois company to which the state owed money. He gave them to his office manager, Edward Epping. Epping took them to the Southmoor bank, and Hintz, by prearrangement with Hodge, cashed the warrants using the funds in the state's $2-million account, and



COMMITTEE of one—Fulbright (center)—started investigation of Hodge with aid of staffers J. H. Yingling (right) and Robert Wallace.



put the money in a cash box in Hodge's name.

From the first half-dozen warrants, Hodge pocketed $85,000 in state funds. By the time his operations were ended, he had cashed some $600,000 worth of warrants. He made out each of them to an Illinois company or individual, endorsed them himself with the name of the company, and cashed them. (He also embezzled about $600,000 from unclaimed depositors' accounts in closed banks for which he was trustee; but since this is a state matter, the committee isn't investigating.)

• **Undiscovered**—All the time, FDIC had been sending its inspectors periodically to examine the bank's books. They didn't detect Hodge's forgeries, and FDIC asserts that only a thoroughgoing audit would have uncovered them. However, it did find that the bank's assets were in bad shape as early as 1948, that they continued in that state for the next six years; and that one director had eased $160,000 of the bank's funds into his own special accounts.

• **Another Deal**—Meantime, Hodge was busy at another bank. In April, 1953, as State Auditor, he closed First State Bank of Elmwood Park, citing for his action the bank's management problems, lack of capital, and loan policy. FDIC arranged for the reopening of the bank through the "assumption" process. This involves the organization of a new bank that takes over the deposits and assets of the closed bank, under scrutiny of FDIC. Originally FDIC wanted the new bank to have a capital of $1-million, but Hodge persuaded FDIC to let it open with only $600,000 in capital.

A month later the bank reopened, having been reorganized as the Bank of Elmwood Park. But now Hodge was a shareholder; he had bought 3,500 shares at $20 each. John Russell, who had been an FDIC representative at the closing of the old bank subsequently became executive vice-president of the new bank. Hodge, at the time, had lent Russell $2,000 on a one-year note.

• **In Jail**—Today, Hodge, Hintz, and Epping are all in jail; the latter two following guilty pleas on a number of charges of conspiring to defraud the state, Hodge himself for his conviction on a number of state charges and on a total of 329 federal charges. All three came to Fulbright's hearing room under close guard.

Fulbright, questioning Hodge closely this week, and emphasizing the wider legislative aspects of his investigation, said that in the whole "Hodge affair" he sees a clear indication that federal statutes governing financial institutions are overdue for a broad revamping.

• **Overhaul?**—Certainly, the testimony in Chicago livens up some of the questions that the committee has had on its mind—questions about the proper role for FDIC and other supervisory agencies in bank examinations and reorganizations, questions about the adequacy of FDIC's powers under present law, and questions about the need for a code of ethics for FDIC employees. The last gains point from the case of FDIC attorney John Russell, who was one of the leading members of the team that reorganized the First State Bank of Elmwood Park, who was offered a position with the new bank even before it was opened, and who's now president of the bank.

Domestic Atom Puts On Mufti

AEC for first time calls public hearing on approval of power reactor project—taking a first long step toward making civilian atom a regulated utility.

The atom this week became civilian—in fact and in deed.

Never before has the Atomic Energy Commission answered in formal public forum for any of its decisions, either military or civilian. But this week AEC announced that it would hold a public hearing on objections to a project it had already approved.

The issue that led AEC to this unprecedented step has been simmering since last June. What brought it to a boil was a petition by three labor unions for a rehearing on the commission's approval of an atomic electric power reactor project. AEC, granting their request, set Nov. 13 for the hearing.

• **Wide Implications**—Safety was the ground on which the unions objected to AEC's temporary approval of the proposed plant—a project of the Power Reactor Development Co., a group of private utilities led by Detroit Edison Co. but the implications of the hearing go far beyond the specific issue.

Indeed, the procedures that AEC has adopted to meet the unions' objections seem to go a long way toward making the civilian atom into a utility to be regulated in accordance with the time-honored "public convenience and necessity."

For, unlike other Washington agencies, AEC is not obligated to hold public hearings on licensing matters. A hearing may be requested—but AEC can say no. And if AEC agrees to a hearing, it doesn't have to be public.

Now AEC—apparently forced by political pressures—has agreed not only to hold a hearing, but to make it public. So far only three other construction permits have been issued by AEC for power reactors—and in these cases, nobody asked for a hearing and AEC didn't hold any. (The three permits were issued to Commonwealth Edison of Chicago and Consolidated Edison of New York—both for large units well over 100,000 kw.—and to General Electric Co. for a small prototype.)

That's why the hearing in the PRDC case sets a precedent that may make AEC's word no longer sacrosanct—particularly on licensing matters involving power reactors.

• **At Issue**—The issue raised by the three unions concerns the safety of the type of reactor design called for in the plant to be built by Power Reactor Development Co. AEC has granted a construction permit for the $40.5-million, 100,000-kw. plant, scheduled to go up near Detroit at Monroe, Mich. The project proposes to use a fast breeder reactor—the type that produces atomic fuel as it consumes it.

• **First Blast**—The controversy actually got started before AEC issued the permit. It began in June when AEC Commissioner Thomas E. Murray—a Truman holdover—disclosed the existence of a report questioning the safety of the fast breeder type of reactor. The report came from the Advisory Committee on Reactor Safeguards—a group of nongovernment nuclear scientists.

The group held there wasn't sufficient evidence now available to give assurance that a fast breeder reactor could be operated at the proposed

site without danger to the public.

• **Fireworks**—Following Murray's statement, Sen. Clinton P. Anderson (D-N. M.), chairman of the Congressional Joint Committee on Atomic Energy, raised the safety question in Congress. But the real fireworks didn't start until AEC issued a preliminary construction permit in August (BW—Aug.11'56,p125).

Then Anderson and Rep. Chet Holifield (D-Cal.), a committee member, let off a broadside at AEC and said they would call for its reorganization next year to put civilian atomics under a separate agency. Other Democrats joined in. And the three unions—the United Auto Workers, United Paperworkers, and International Union of Electrical Workers—asked for a hearing on AEC's approval of the plant, and for immediate suspension of the construction permit. The unions:

• Charged that the proposed reactor would "imperil and destroy the health and lives" of union members.

• Accused AEC of suppressing the advisory committee safety report.

• Asked an inquiry into PRDC's ability to finance the project.

Though AEC granted the hearing, the majority refused to suspend the construction permit. It pointed out that this permit does not give the holder the right to operate. For this, a separate license must be obtained from AEC.

• **Novel**—In granting a public hearing for the first time, AEC, found itself in a novel situation in more than one respect.

For one thing, the furor over its failure to make public the safety report led it to reverse itself on this point. At first, it balked even at disclosing this report to joint committee members. Now it finds that "public interest would best be served" by making the document public—and it did so this week.

But to top everything, AEC found itself involved in a public hearing without ever having had a hearing procedure.

Under AEC regulations, a commission member could have conducted the hearings. But perhaps because of the novelty of the situation, AEC turned to another agency for an examiner. It tagged for the job Jay A. Kyle, chief hearing examiner of the Federal Communications Commission.

• **Hearing Rules**—Kyle won't make any recommendation, but will merely certify the hearing record to AEC—which will then sit in judgment on its own action in issuing the construction permit. AEC's order puts it up to Power Reactor Development Co. to demonstrate that it can satisfy the "requirements of law and commission regulations."



JAMES J. NANCE

New Face at Ford

Auto maker hires Nance to develop long-range marketing policy. But the job goes deeper than that.

Ford Motor Co., rich in plants and market potential but with an aging top executive team, this week bought itself a future-management insurance policy and some immediate top staff strength. The board elected James J. Nance, 55, vice-president-marketing and appointed him to the administration committee and chairman of the merchandising committee, effective Nov. 1.

Until Aug. 6, Nance was president of Studebaker-Packard Corp., and before that had built a reputation as a marketing specialist at Frigidaire Div. of General Motors and as president of the Hotpoint subsidiary of General Electric. While his apparent function at Ford will be to develop long-range marketing policy on the staff level, the job goes deeper than that. As time goes on, he will work directly with Pres. Henry Ford II and Chmn. Ernest R. Breech on a variety of corporation policy matters.

• **Replacements**—The present executive line-up at Ford shows why. On their next birthdays, Breech will be 60 years old and Lewis D. Crusoe, executive vice-president for autos and trucks, will be 62. D. S. Harder, executive vice-president for manufacturing, will reach retirement age next year. There is a wide gap between those ages and the ages of the auto division chiefs, the oldest of whom is 48.

Realistically—a point that has aroused the interest of management experts—Ford has been exceptionally short at the top staff level, considering that the company theoretically is molded along the lines of the General Motors staff-and-line concept. Both Crusoe and Harder, while obviously concerned with corporation policy and planning, are operating men. Marketing policy, in particular, has been developed in the divisions with coordination through Crusoe's office. For some months, Ford Motor Co. has not even had a vice-president-sales.

• **Policymaker**—Nance's job will be to formulate new marketing philosophy and concepts without conflicting with the marketing efforts already under way in the divisions. And down the road there may be other, more familiar outlets for his experience; Ford has often been rumored to be interested in acquiring a going appliance manufacturer.

Those are the reasons Ford sought Nance and why Nance took the job despite two widely held beliefs in Detroit indicating that he had no future in the auto industry. The beliefs: that Nance failed at Studebaker-Packard so that the company finally had to be bailed out by Curtiss-Wright; and that Nance got such a favorable settlement of his contract with S-P that he could not afford to go to work for another auto company.

• **Rewards**—Actually, top auto people—at GM as well as at Ford—know Nance did not personally fail at S-P; he successfully completed a planned program but did not get additional financing that had been assured (BW—Aug.11-'56,p26). And the $286,000 annuity established by the S-P settlement with Nance is only partly forfeited if he goes to work for another auto company because part of the money was due him under a deferred bonus plan for 1950 and 1951. Ford, with a stock option and bonus plan, offers a more attractive long-term future.

• **More Than Money**—Nance is still young enough and well enough off financially to be more interested in the job potential than in immediate cash return. At Ford, for the first time in his life, he will be a staff man rather than an operating man. His first job was at National Cash Register Co. in Dayton, Ohio, in 1923. He joined Frigidaire in 1927, becoming advertising director before going to Washington with the War Production Board. Charles E. (General Electric) Wilson, with whom he worked in Washington, sent him to Chicago in 1946 as executive vice-president of Hotpoint and he moved to the top spot a year later.

In 1952, Nance turned down a choice of three executive vice-presidencies at GE to take the job of president of Packard Motor Car Co. with the avowed purpose of fattening up Packard until it would be an attractive partner to form a fourth full-line auto company.

Billion-Dollar Season for TV



ABC offers Alistair Cooke's Omnibus, a transfer this season from CBS. Critics acclaimed the first program last Sunday, featuring composer Leonard Bernstein.



NBC has scheduled Mary Martin, above, as Billie Dawn in Born Yesterday in a color show on the Hallmark Hall of Fame Oct. 28. Paul Douglas is her co-star.



CBS had Jack Palance and Kim Hunter as stars in its second Playhouse 90 show this week, Requiem for a Heavyweight. It's TV's first weekly 90-minute drama.

The new fall season finds the nation's advertisers pouring dollars into TV as never before. The total TV bill for time and talent in 1956 will reach $1.2-billion, according to Printers' Ink-McCann-Erickson preliminary estimates. That's about $200-million more than last year.

Advertisers are spending this unprecedented sum with one aim in mind: to get as many as possible of the country's 37-million TV families to watch their programs.

The three networks have entered the battle of the ratings with a powerful line-up of shows, new and old, each calculated to glue the national audience to one channel on the dial.

I. The Wild Card

But this year a new contestant for program honors has stepped into the ring. In what Variety, the trade paper of show business, called "perhaps the most important video event of the year," the steady stream of superior feature films from Hollywood vaults and from England has become a flood.

This week, for example, 20th Century Fox announced it was negotiating to release another big bundle of films to TV. With the single exception of Paramount Pictures, Inc., every major studio has made its pre-1948 feature backlog available for sale to stations. The big question is: What will these features do to TV viewing habits?

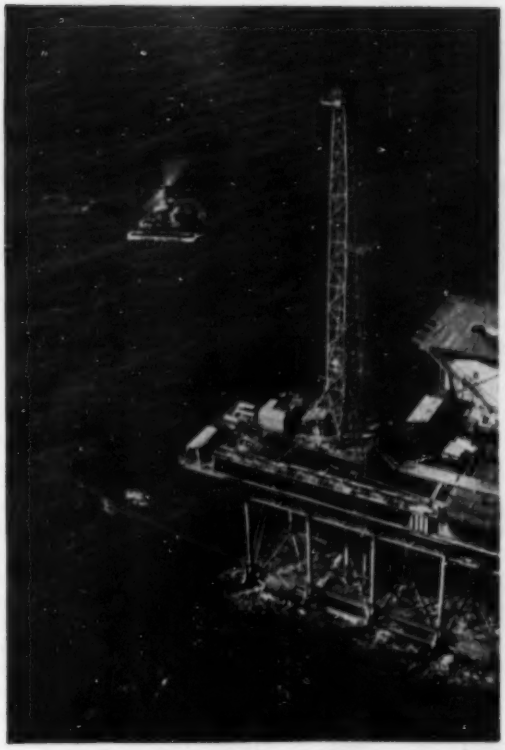
• **Filling Time**—A lot of stations on the networks will schedule feature films at hours that don't conflict with network shows. Used this way, the movies will affect only local station competition. The nets themselves will use features as local programing for their owned and operated stations. But many more independents will run features as direct competition to network shows.

In New York, for example, several independents schedule film programs that cut directly across the best evening viewing hours. As this happens around the country, some trade observers believe it will make serious inroads on network audiences.

• **Pro and Con**—Network executives are taking a wait-and-see attitude, tinged with optimism.

Richard A. R. Pinkham, NBC vice-president for TV network programs, admits that some of the better feature films may cut into network audiences for a while. But many of them, he feels, will prove to be so dated that they won't hold audiences. And as they are repeated, they will lose whatever popularity they have.

Hubbell Robinson, Jr., CBS execu-



Sinclair
makes important offshore discovery

UNDER THE DEEP WATERS of the Gulf of Mexico, 42 miles out from the shore, Sinclair Oil & Gas Company has found an important new oil field. The discovery well was the first drilled on a 10,000-acre lease owned equally by Sinclair and three other companies.

To increase the Company's production of crude oil, Sinclair drilling rigs are busy this year on the prairies of Canada, the East African veldt of Somalia, deep in Venezuela, and throughout the great Mid-Continent, Rocky Mountain and Gulf Coast areas of the United States.

In the first half of 1956, Sinclair's total net production of crude oil and natural gas liquids rose to a new high of 166,664 barrels daily. Sinclair continues to increase its crude oil production at a faster rate than the oil industry generally.



SINCLAIR

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tive vice-president in charge of TV network programs, adds that the immediacy and up-to-date techniques of network programing will always give these shows an advantage over old feature films. Robinson feels that if the nets were to throw feature films into good network viewing time, it would end TV's development as an entertainment medium.

• **Nets Don't Want 'em**—Even though many of the features currently available rank high as entertainment fare, the networks could not easily use them. For one thing, the independents' way of blanketing hundreds of markets around the country with a single film yields the distributors prices that the nets couldn't afford to meet, even though the price per station may be modest. And the nets would want to show a given film only once—for the sake of program variety and the development of their own live shows—whereas the small independent stations will sometimes run it as often as five times a week.

Even in the face of the feature film fare that individual stations will be showing, CBS and NBC are sticking to their policy of showing only an occasional outstanding feature on networks, such as forthcoming The Wizard of Oz on CBS. ABC is continuing its Famous Film Festival this season with a number of superior English imports.

II. More of the Same

The current season offers little in the way of startling new program formats. There are plenty of hour and hour-and-a-half shows, as well as the half-hour variety. But, as one network official remarked: "There's no magic in a format. It's how well the show is done that counts."

CBS has introduced Playhouse 90, a 90-minute weekly dramatic show on Thursday night. This is the first dramatic program of this length that any net has attempted on a weekly basis. The longer time period permits a better presentation of plays that don't lend themselves to heavy cutting. And it is designed to please advertisers who want the prestige and impact of a big expensive show but also want to be on the air every week.

Playhouse 90 will be sponsored in half-hour segments. And CBS has scheduled it following its popular Climax, an hour-long dramatic show. This is something of a departure from the back-to-back alternation of comedy and adventure shows frequently found on TV. It provides an uninterrupted 2½ hours of dramatic viewing.

NBC, which pioneered the spectacular, has 29 90-minute color spectaculars on its schedule, along with six operas and three or four special holiday extravaganzas. These will be seen mostly on Producers Showcase on Monday nights, as Saturday night spectaculars, and on the Sunday evening Hallmark Hall of Fame shows.

Robert Lewine, ABC vice-president in charge of programing and talent, believes that the half-hour format is proving to be more successful programing for the viewer and the advertiser. His view is reflected in ABC's heavy schedule of half-hour adventure and comedy shows. In spite of its limited budget, ABC has been showing a lot of program strength. Now it has installed Omnibus, which moved over from CBS, in a new Sunday evening spot.

• **Squaring Off**—The big-splash shows get a lot of critical attention. But the nets also wage the rating battle with their "bread and butter" shows, the half-hour adventure and comedy programs designed for family appeal. All three nets have come up with a healthy crop of these shows. For the most part, each net throws its new show against some popular established show on a rival network.

III. New Contenders

NBC's new series, Sir Launcelot, is scheduled for Monday night, competing with Danny Thomas on ABC and Burns and Allen on CBS. CBS, in turn, has put its new comedy program, The Brothers, on Tuesday night to fight it out with ABC's Wyatt Earp, and NBC's newcomer in the same time period, Noah's Ark. ABC, taking advantage of the success of Lawrence Welk on his regular Saturday night hour, has matched him in a new hour-long Monday night program against Robert Montgomery on NBC and December Bride and Studio One on CBS.

• **Quiz and Color**—The nets are stepping up scheduling of that audience magnet, the quiz show, with even bigger jackpots. Sponsor, a trade magazine, estimates that giveaways on the network quizzes this season could total as high as $8-million. In addition to The $64,000 Question and The $64,000 Challenge, CBS has three other quizzes, NBC has four, and ABC has one.

The season will be more colorful, too. NBC's parent, Radio Corp. of America, is strongly pushing color TV receivers, and the network is going all-out for programs in color. Its color schedule offers six times as much viewing as last year.

CBS, too, has increased its color programing. Arthur Godfrey's new Wednesday night show, Ford Star Jubilee, and other CBS programs will be regularly broadcast in color.

Housing Debate

Huge Chicago project announced, at a time when many think that myriad-unit type is on the wane.

Mass home builders this week had their eyes on a project that may cast some light on whether myriad-unit developments of the Levittown type are the wave of the housing future or an already receding ripple. At a moment when housing starts have fallen 17% below last year, Centex Construction Co. announces a $175-million project in the western part of Chicago, with an ultimate target of 6,000 homes. Only 500 are to be built the first year.

• **Debate**—A few years ago, there was general agreement that the huge multi-unit projects set the pattern for future homebuilding. Now, two arguments have been advanced against the continuing success of the big developments: (1) the difficulty of getting a mortgage on the individual house, and (2) a possibility that the market for mass-produced houses is saturated, with buyers demanding custom features that slash the builders' profit.

However, some observers contend that the Centex project won't really test either argument. They claim that Chicago has had much less than its share of the mass developments, and less than its share of FHA and VA loans. Also, they say, rents in Chicago are rising a bit faster than elsewhere, creating another plus factor for house sales.

• **Foot in the Door**—Centex has had its eye on the Chicago area ever since 1953, when it built a 1,300-unit project in Waukegan, Ill.

As an entrance wedge, Centex paid about $4-million to acquire the 1,500 acres northwest of Chicago for its new Elk Grove Village. Along with approximately 6,000 homes to be built over a five-year period, the company plans to put up shopping centers, schools, churches, parks, and will install water and sewerage systems. Four grade schools will be built and the land and buildings donated to Elk Grove. "You can't sell houses without schools," says Vice-Pres. Frank Crassen, "and the village couldn't afford to build them."

The first homes to go up will be ranch style, and all will have three bedrooms, one-and-a-half or two baths, and attached garage, and will range in price from $15,000 to $20,000.

According to Pres. Tom Lively, the only worrisome angle could be the tight mortgage market, but he says "it can't get much tighter than it is right now."



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When this Telephone Branch Office Service was started, the company let its customers know about it through its salesmen, by direct mail—and by a listing in the local telephone directory.

The company's one actual branch office has been closed—saving $12,000 a year—with no loss of business in that city.

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Call by Number. It's Twice as Fast.

BELL TELEPHONE SYSTEM

In Business

• • •

Anaconda Bets $1-Million On Extracting Alumina From Clay

Anaconda Co. is betting $1-million that it can extract alumina—the oxide from which aluminum is made—from domestic clays. The bet: a pilot plant in Montana that will be ready by next fall to test the process on a commercial scale. **If the test succeeds, Anaconda plans to build a $35-million plant, probably near the clay beds of northern Idaho.**

All aluminum producers—Anaconda is fourth largest with 60,000 tons a year—now get their product from bauxite ore. Three-quarters of the U. S. supply has to be imported; the rest comes from the Gulf area and Arkansas. Four tons of bauxite yield two tons of alumina, under chemical treatment; these two tons in turn yield one ton of aluminum, by electrolytic reduction.

Anaconda's pilot plant will be geared to process about 50 tons of clay per day, from which it is hoped to get 10 to 14 tons of alumina.

• • •

Private Utility Nearing Victory In Latest Hell's Canyon Ruling

The long running battle over private vs. federal development of Hell's Canyon moved a step closer to absolute settlement this week. **Unanimously, a three-judge U. S. Court of Appeals upheld the legality of a license that the Federal Power Commission gave to Idaho Power Co. for three low dams in the vast gorge of the Snake River on the Idaho-Oregon border.**

Public power groups—waging a delaying action to keep open the door for a $400-million high dam that Congress has rejected several times—now have only two possible moves: a petition to the Appellate Court for a rehearing, and an appeal to the Supreme Court.

• • •

One-Dose, Oral Polio Vaccine Faces Test on Volunteers

Make-or-break tests will start around the end of this year on what may prove to be the long-sought live but harmless virus that can be taken orally for immunization against polio.

Success of the virus in tests on chimpanzees was announced last week by its developer, Dr. Albert Sabin of the University of Cincinnati's College of Medicine. Sabin, a critic of the Salk dead-virus vaccine program, hopes that his work will lead to a single-dose vaccine that will give long-term, perhaps lifetime, immunity to the three virulent strains of polio virus (BW—Mar.17-'56,p136).

Tests of the Sabin virus will be made on volunteers among the inmates of a federal reformatory in Chillicothe, Ohio, and on volunteers in other countries.

Sabin claims that his live vaccine would be cheaper to produce than the Salk type, and that it would prevent spread of polio through a whole community, instead of protecting merely the persons immunized. He thinks 20 liters of his vaccine would be enough to vaccinate 2-million people. Work toward a similar live vaccine is being pushed at the Lederle Laboratories.

• • •

FPC O.K.'s Natural Gas Piped In From Mexican Fields

Natural gas from Mexico will soon be flowing through pipelines to U. S. consumers. The Federal Power Commission this week O.K.'d a deal by which Texas Eastern Transmission Corp. will import gas from south-of-the border fields owned by PEMEX, the Mexican government's oil company.

Texas Eastern has agreed to take a minimum of $5-million worth of gas annually from PEMEX for the next 20 years. For its part, PEMEX hopes to borrow heavily against these prospective sales in order to finance its plans for expanded exploration and development.

The deal gives Texas Eastern a new major source of supply for its 5,600-mile pipeline network. And for the U. S. market as a whole, it means that a second foreign source is added to the gas that will be coming in from Canada.

• • •

Business Briefs

Oil drilling and leasing can be resumed in the **disputed area of Louisiana's tidelands** under an interim agreement reached this week by the state and the federal governments. A six-man board—half state, half federal—has the final say on new lease applications in the disputed zone between the three-mile line and the three-league line. The agreement will stand till the Supreme Court settles the ownership dispute.

Louis E. Wolfson's **Merritt-Chapman & Scott Corp.** this week took its two excavating equipment subsidiaries off the block (BW—Oct.6'56,p34). The corporate shell of Wolfson's old **Capital Transit Co.** offered to buy the two, **Marion Power Shovel Co.** and **Osgood General.** Meanwhile, Wall Streeters say that Wolfson is paying premium prices for stock of **Brown Co.**, New Hampshire paper maker traded on the American Stock Exchange.

The new soft coal wage agreement this week had its reaction on prices. Led by Pittsburgh Consolidation Coal Co., the biggest of them all, most northern producers **tacked 40¢ onto the price per ton** of soft coal. The wage-and-fringe increase had added up to $1.60 per day.

Harvesting the **smallest corn acreage** of this century, farmers apparently are picking the **second largest crop** on record—nearly 3.4-billion bu. Yield per acre, estimated at 43.4 bu., is the biggest ever.

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WASHINGTON OUTLOOK

WASHINGTON BUREAU
OCT. 13, 1956



The political situation, with 23 days left to shop for votes:

—•—

Democratic White House hopes are on the decline. The signs indicate that the frost has hit Stevenson's early bloom.

Stevenson's drawing power is slackening. Crowds turned out in the early post-convention days, especially in the Midwest farm country and cities where the Walter Reuther wing of the AFL-CIO is strong.

But you see a change in the recent Eastern swing. This tour took in parts of New Jersey, Pennsylvania, New York, and New England. The crowds were slim. Except at New Haven, where Yale students hooted Stevenson and declared their like for Ike, the rallies were on the quiet side. Those who turned out listened, but their demonstrations were far short of wild.

Stevenson, himself, seems to be tiring. He has set a hard pace, with train trips here, car trips there, and plane hops elsewhere. Resting time is limited. And Stevenson is doing most of the work himself, both on his speeches and his strategy. His staff is not strong.

The effort is to make a health point against Pres. Eisenhower. But the result is showing on Stevenson. He lacks the sparkle and enthusiasm that made him a reputation in 1952.

—•—

Here's what some observers now are saying about Stevenson:

He's promising too much, either directly or by implication—in his comments on disarmament, ending the draft, halting H-bomb tests, bigger spending (with the budget balanced), lower taxes, higher farm prices, and complaints against the high cost of living.

Voter reaction is mixed. There's no doubt that Stevenson is swinging some farmers away from Eisenhower. And he may be picking up some union votes, too. He is working more closely with union leaders than in 1952. But his campaign is costing some "egghead" votes—voters who liked the high-level candidate of 1952 better than the so-called "new" Stevenson.

But the outcome still isn't cut-and-dried.

Stevenson will extend himself even more, both in terms of personal appearances and promises of what he will do if elected.

And the fight for control of Congress is very close. Everywhere the Democratic candidate goes, he puts in plugs for fellow party members running for office, whether House, Senate, or state house.

The odds will continue to favor Eisenhower, right on up to election eve. In fact, they now are increasing a little, after the easing that followed the conventions and the start of the campaign. But note that the betting puts Eisenhower ahead of his party just about everywhere. This is his big advantage over Stevenson, who is running behind his party.

—•—

Eisenhower is just getting going. Up to now, he has been making what politicians call spot appearances—big speeches in big towns.

Next week he will hit the road—his first real stumping trip of the season. He will start in Minnesota, with 11 electoral votes, and then move into the Northwest. He will point the trip at helping GOP Senate candidates who are in trouble—Langlie in Washington, McKay in Oregon.

WASHINGTON BUREAU
OCT. 13, 1956

Most of the next two weeks will be spent on the road. It's a good bet that Eisenhower will have more to say to the Midwest farmers. And he will also show himself on speaker platforms in the big-voting East.

Eisenhower's crowd-pulling power appears on a par with the 1952 campaign. He has packed them in everywhere he has gone. Even in the Pennsylvania Democratic stronghold of Pittsburgh this week he had crowds on the streets as he motored in from the airport. And the hall was packed. Democrats discount the crowds. It is a fact that a sitting President has an advantage over a challenger. People will turn out to see a President when they won't leave their TVs to see a candidate.

—•—

See how Agriculture Secy. Benson is spending money to help farmers. He has been cautious on supporting market prices, especially where perishable products are involved. Help for these is costly. But only this week Agriculture mimeographs have turned out a series of announcements, all calculated to help producer groups. Their headlines:

USDA buys 6,656,000 lb. of hamburger this week to assist cattle producers. Aim is to prop prices in the big fall marketing season.

USDA buys 1,737,000 lb. of turkeys this week to help producer prices. Turkey raisers will benefit. You will pay more at Thanksgiving.

USDA buys 58,636 cases of eggs this week to help stabilize producer egg prices. It's the time of the year when hens lay more and egg prices in the stores usually show a decline.

There will be disappointments on soil bank checks. Many corn farmers had hoped to get these production cutback checks in time to help finance seed and fertilizer for fall planting. But many of the Agriculture Dept.'s local committees are controlled by Democrats. The charge is made that many of these have held back on turning in performance reports in order to delay soil bank checks beyond Election Day.

—•—

Unemployment as a campaign issue is petering out. Michigan is the state where the Democrats figured they had the best chance. In other states, the unemployed were spotted in a few communities. But in the auto industry, this year's sales slowdown created a statewide issue. Now it's shrinking as the companies rush to get new models on the market. It now looks as if the unemployment total for the nation will be a low 2-million by Nov. 6. That's what the economists call "frictional"—a minimum.

Union leaders are betting a big stake on the elections. By and large, they are for the Democrats. They recognize that Eisenhower will be hard to beat. They are out to stop him if they can.

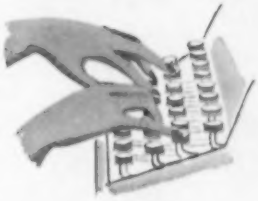
But what they really want to show is that they have strength in local elections—can put over or cut down candidates for the House and Senate.

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Another Federal Reserve discount rate hike is talked. It's prompted by the fact that on short-term money (Treasury bills) rates again are above the Fed's 3% discount rate. But the current guessing is that action, if any, will be delayed until after the elections. Washington has no intention of retreating in what it considers a major battle against inflation. But it does want to keep policies out of politics as much as possible.

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WATCHING AFL-CIO ethical standards, Jacob Potofsky, Arthur Goldberg (counsel), A. J. Hayes, David Dubinsky, George Harrison, and Joseph Curran are . . .

Labor's Blue Ribbon Grand Jury

Operating behind closed doors and as much in secret as any grand jury session, these six men are sifting charges of corruption against unions affiliated with the AFL-CIO. If the evidence stands up, the offending unions will be taken before the federation's high command—the executive council—for punishment.

This succinct, step-by-step process is the culmination of the AFL-CIO pledge, at the time of its last-December alliance, to war on any corrupt practices within its 140 or more affiliated unions.

• **Three Cases**—The first sitting of the five-member AFL-CIO Ethical Practices Committee last week might have been the easiest session that the group will ever hold. In three days of hearings, the committee took on three unions faced with charges of mishandling health-and-welfare funds—or, at the least, misjudgment in the use of the funds. The evidence had already been supplied, almost in full, by the labor committees of Congress.

In single full-day sessions, Chmn. A. J. Hayes and his associates heard the digested Congressional charges and counter arguments by the three unions—the Laundry Workers, Distillery Workers and Allied Industrial Workers. AFL-CIO's special counsel, Arthur J. Goldberg, who set up the working processes that the committee and the charged unions followed, was the acting prosecutor.

• **Lawyers' Show**—The sessions at the AFL-CIO headquarters in Washington were strictly a lawyers' show all the way. The Ethical Practices Committee sat at a makeshift bench, comprised of two office desks pushed together. Goldberg worked from one side, the defense witnesses and counsel sat in the well before the committee.

The committee, unions, and their counsel listened to the charges outlined by Goldberg, whose remarks were buttressed by questions and comments from Hayes and other committee members. Then the union officials, under questioning by their lawyers, presented their defense. A verbatim record of each hearing was taken. If one of the unions is expelled, its lawyers would have the record to take to federal courts to determine the right of the AFL-CIO to so act.

While this procedure is normal for grand juries, the setup stirred somewhat of a tempest in AFL-CIO headquarters. Some old line unionists stubbornly insist on the autonomous nature of AFL-CIO affiliates, and maintain that AFL-CIO does not have the right to sit in judgment on unions. Only courts should have such a power, they say—and then only to punish violations of law, not ethics.

• **Growing Pains**—The committee itself suffered some growing pains. As the hearings were about to begin, two committee members—David Dubinsky and Jacob Potofsky—asked Goldberg to do the prosecuting, even though John McCarty, assistant to AFL-CIO General Counsel Albert Woll, had already been assigned the job. Goldberg took over, and would not permit McCarty into the hearings.

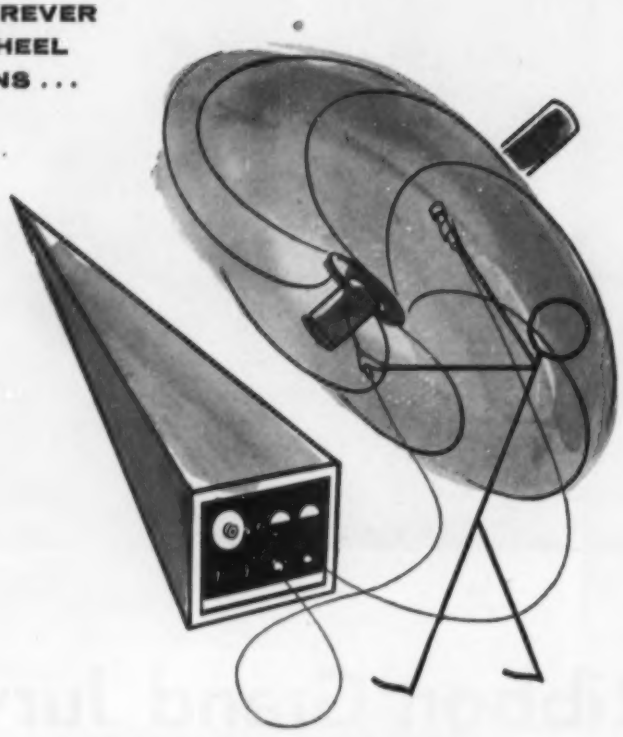
Woll, who handles a number of union accounts besides being AFL-CIO counsel, promptly dropped the accused Laundry Workers as a client. Apparently he decided he did not want to be in the position of counseling clients who were on opposite sides of the corruption charges.

• **New Broom**—In the past, the AFL and CIO, separately, have thrown out unions on both corruption and Communism charges. But the activities of the Ethical Practices Committee is the first attempt at housecleaning by a standing watchdog committee.

The outcome of the first three cases will be important to the unions on trial, of course. But equally important are the methods used by the committee in this, its first time in action.

These were not the biggest cases that will come along. The unions are small; none can claim 100,000 members. But the trial system used to pursue the charges, and the reaction among union officials to these

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". . . all the cases involve welfare fund operations, but charges differed . . ."

JURY starts on p. 43

methods, will do a great deal to define the future of the anticorruption group.

I. The Charges

While all the cases involved welfare fund operations, not all the unions faced the same degree of charges. Basically, the Ethical Practices Committee—which used privileged testimony from Congressional committee records—spelled out the cases against the unions this way.

Distillery Workers: On the surface, the strongest case was against the Distillery Workers—so strong that one committee member, George Harrison, had suggested last summer that the union be suspended from AFL-CIO. But, cautiously laying a legal groundwork for the committee, Goldberg urged that the same processes apply in all cases, and the distillery union was formally accused of misuse of welfare funds negotiated by its officers. Specifically, its secretary-treasurer, Sol Cilento, was accused of taking more than $100,000 in payments from the fund.

Laundry Workers: Embezzlement of welfare funds was also the charge in this case. Abe Saperstein, broker of the Laundry Workers fund as well as the fund of the Distillery Workers, was accused of taking some $900,000 from the Laundry Workers fund. The union's secretary-treasurer, E. C. James, also was accused of being involved in misuse of the fund.

Allied Industrial Workers: This union went through Congressional hearings under its old name, the AFL United Automobile Workers. Its secretary-treasurer, Anthony Doria, and Angelo Inciso, president of the union's Chicago local, had faced Congressional probing into "organizational expenses" taken from welfare fund supplies. Such expenses as $1,000 diamond watches and watch bands, cases of whiskey, $100 cuff links, and so on were brought out by members of Illinois Sen. Paul Douglas' committee.

II. Defense

The Allied Industrial Workers, the largest of the three unions with some 75,000 members, took the initiative in the Ethical Practices hearings. Its president, Earl Heaton, came into the session armed with documents to back its defense that the union was free of

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corruption, in some places to show where officials cleaned house and in others to defend against the charges.

• **Gamut of Charges**—Heaton and other union officials, aided by veteran labor attorney David Previant, ran the gamut of charges against the union, even widening the scope of the hearing beyond evidence developed by Congressional welfare fund hearings. Heaton went into his union's relationship with John Dioguardi, a convicted extortionist, who several years ago led an Auto Worker's local in New York, explaining how "Johnny Dio" was urged to resign following a hearing before the union's officers.

Heaton told the Ethical Practices Committee that Inciso was removed from the union earlier this year. The union lost 5,000 members to Inciso, who set up an independent union in Chicago. In defending Secy.-Treas. Doria, Heaton pointed out that the Douglas Committee's evidence of expenses for watches, rings, and so on came solely from the union's books and Doria's complete bookkeeping system.

III. Outcome

Any charge sustained by the Ethical Practices Committee will probably lead to expulsion of the union from the AFL-CIO. The committee will make its recommendation to the 29-man executive council, which can vote a suspension from AFL-CIO until the next convention can act on expulsion. But whatever recommendation the Hayes group makes will almost surely be followed by the federation.

Expulsion from AFL-CIO would be a critical blow to a union such as the Allied Industrial Workers, organized mostly in auto shops but also something of a catch-all union. Being outside AFL-CIO would leave it open to raiding by affiliates of the federation—an action now generally barred by the anti-raiding policy.

• **Cautious**—Top union officials, however, will decide cautiously before taking the expulsion step. The Ethical Practices Committee and its processes are in a testing period; Hayes and the others will move slowly in following up the hearings. They may take several months before acting. There's no desire for a quick condemnation of the accused unions.

Any evidence to the contrary of the welfare fund charges will be minutely examined. It's quite possible the Allied Industrial Workers, besides giving a picture of a union that wants and may well have earned the right to stay in the AFL-CIO, will supply the Ethical Practices Committee with a chance to show that its mere existence led to some of the cleanup work. END

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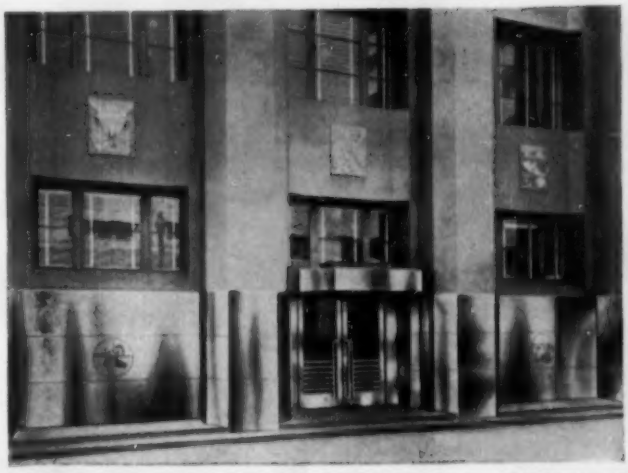
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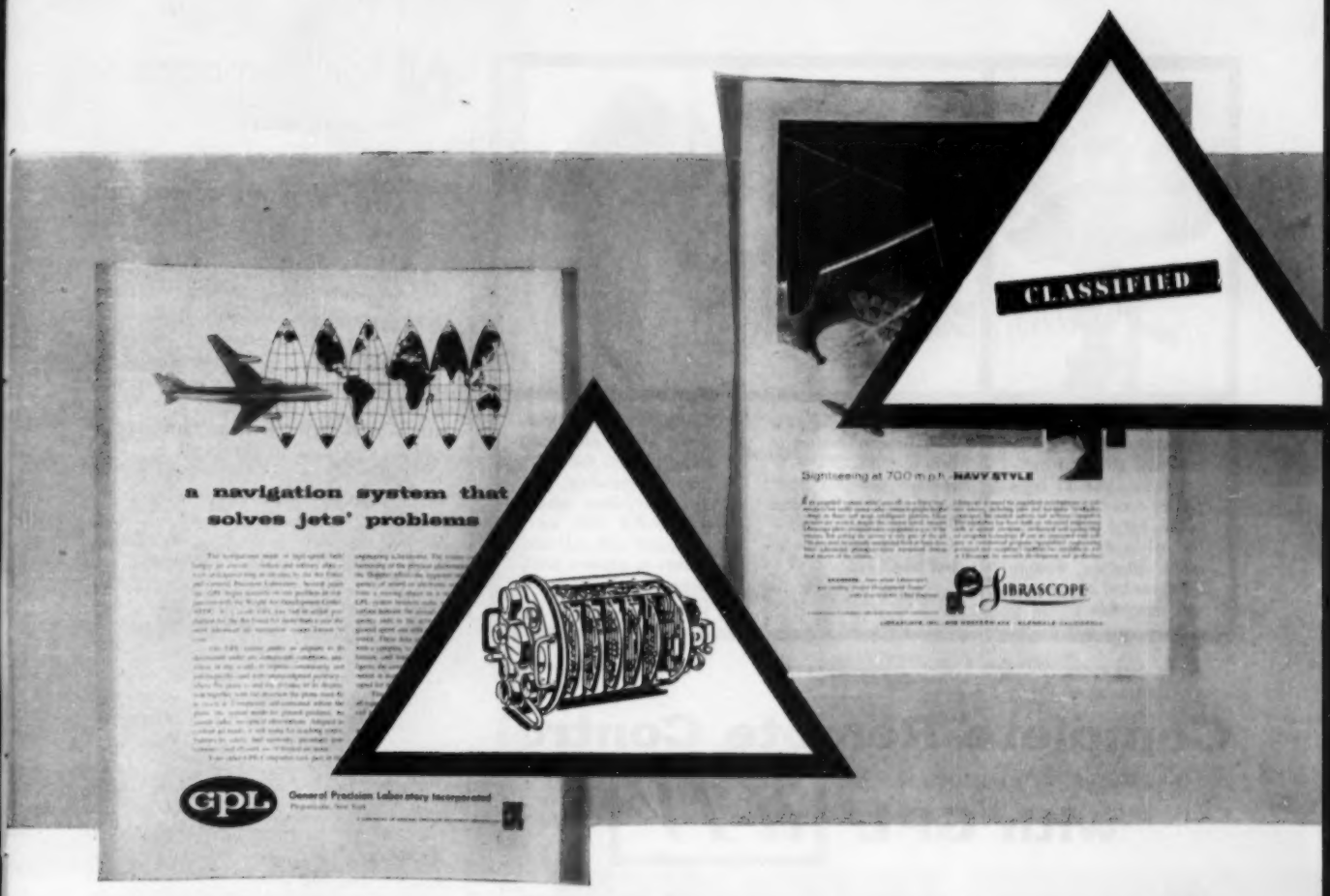
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18 pounds. Yet it provides accurate heading information at all latitudes, is rugged enough to maintain its high accuracy despite the jolts and speeds of jet flight. The Air Force has just selected it as standard for all new fighter craft. Kearfott's N-1 Compass System has been the navigational standard for Air Force bombers for 5 years.

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All for Democracy

Westinghouse permits IUE local to hold in-plant voting for sake of more democratic election.

Heated political campaigns and union elections frequently cost management heavily in wasted time and impaired morale. Aware of that—and interested in improving union relations—Westinghouse Electric Corp. recently allowed its 10,000-member East Pittsburgh local to hold important section steward elections in the plant.

From time to time, other companies have worked out similar election arrangements with their unions. Generally, the objective is to speed the voting, to insure greater participation and, frequently, a more democratic election—with fewer problems afterwards.

Westinghouse Local 601 of the International Union of Electrical Workers had this in mind when it decided to ask for the in-the-shop voting. It wanted "absolutely no question regarding the honesty of the vote," its officers said.

Local 601 section steward elections always generate a lot of controversy. If full participation by the 10 to 30 workers in each section could be assured, and the votes counted immediately on the spot, there would be fewer openings for criticism.

Though the IUE local asked for the in-the-shop voting procedure, it didn't seriously expect Westinghouse would grant its request. After all, company and union earlier this year fought out a bitter 156-day strike, and resentments lingered after its settlement.

But to the local's surprise, Westinghouse "cooperated wonderfully" once it was assured there would be only a minimum of lost time—no milling around or engaging in political debate—while waiting for election results.

• **Caution**—Westinghouse spokesmen say the in-the-shop election was unique only in that ballots were counted on the spot. They carefully avoided any inference that the company had done anything out of the ordinary to smooth relations in a plant with a record of poor labor relations. What was done at East Pittsburgh would "probably be done elsewhere under similar circumstances—where there is strong political controversy within plant unions," company people say.

At the same time, one Westinghouse executive says cautiously that the company is being "very careful" in its relations with Local 601, that it will do anything "within reason" to improve morale. END



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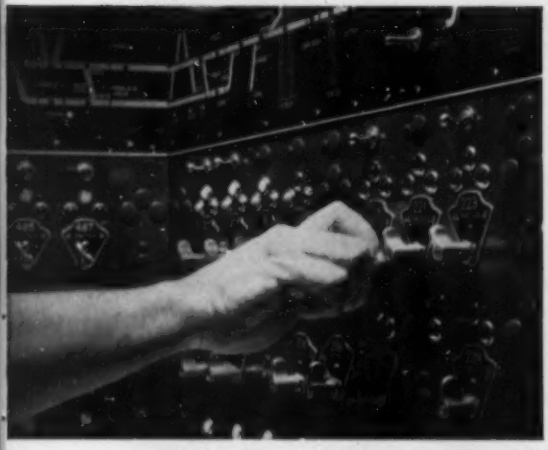
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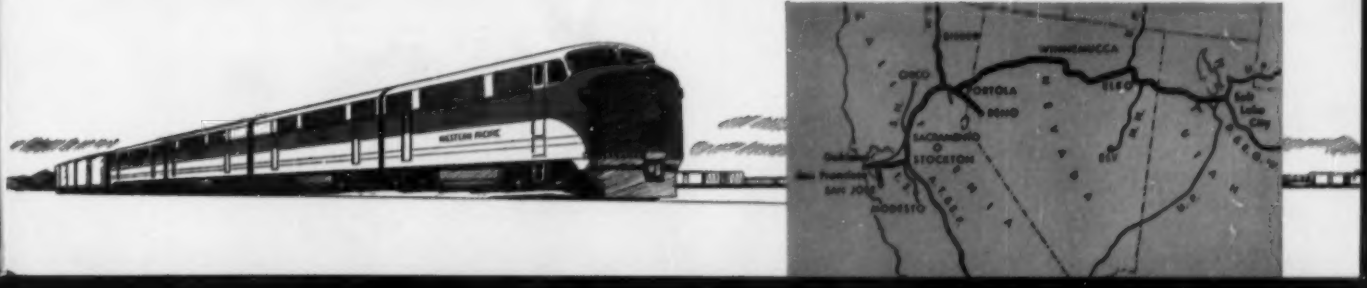
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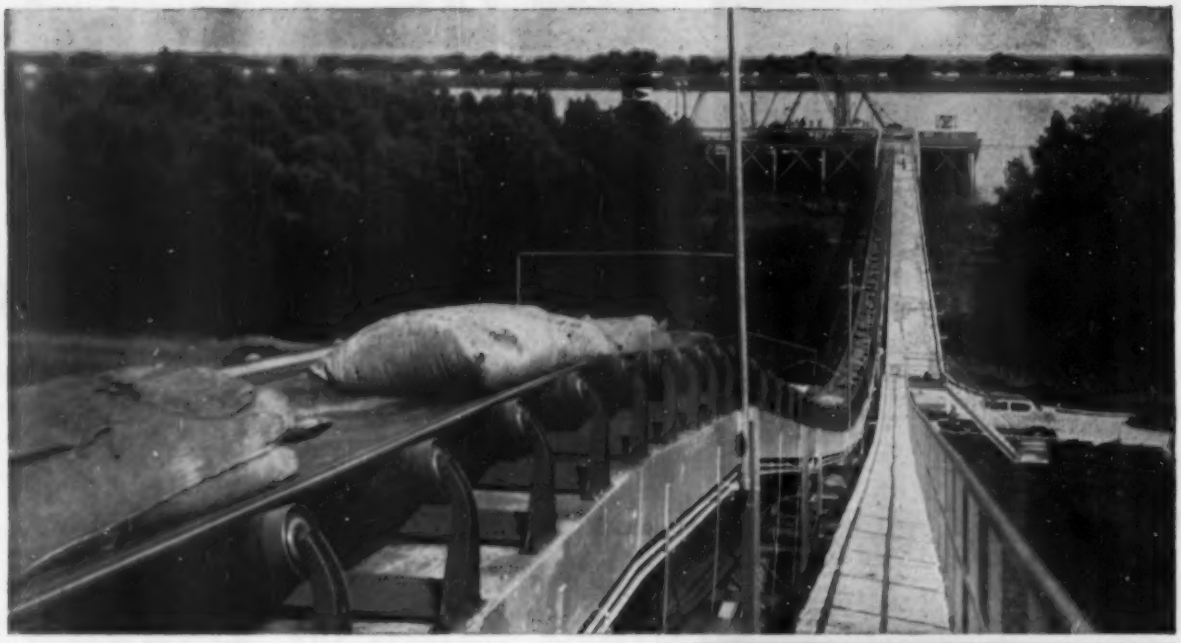
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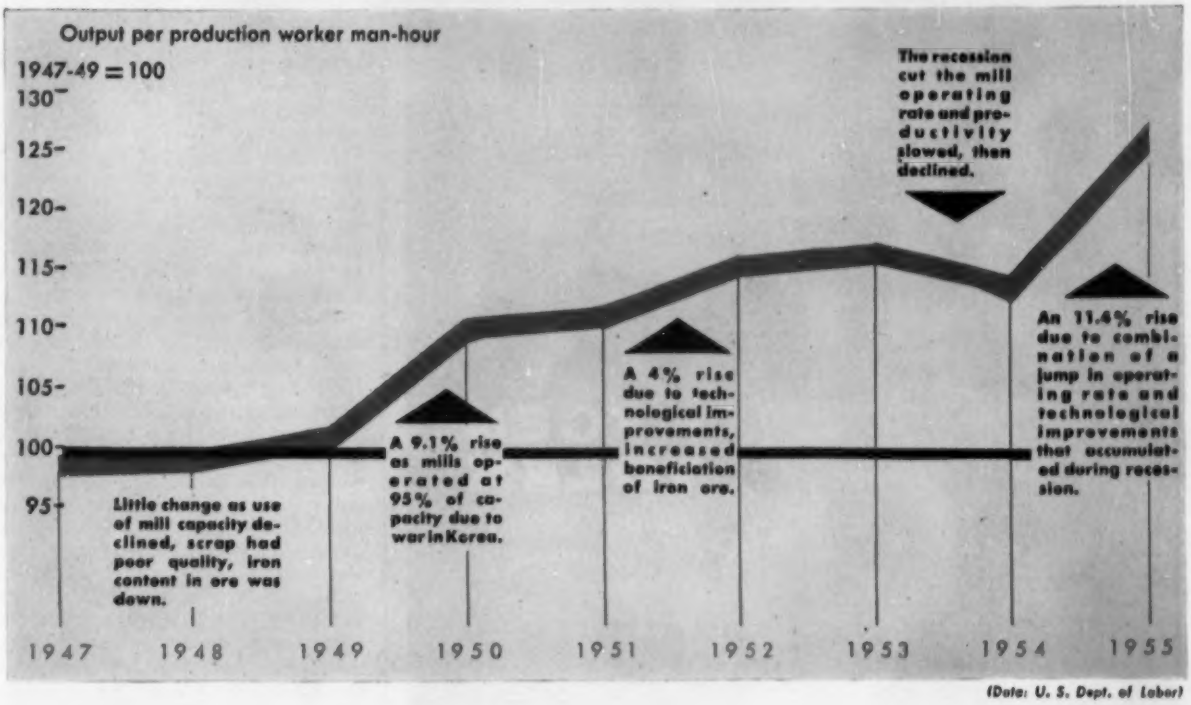
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The Erratic Behavior of Steel Productivity

Changes in the Operating Rate and in Quality of Scrap and Ore Cause the Pressures



(Data: U. S. Dept. of Labor)

Why It's Hard to Gauge Rate

Productivity gains are always a major issue in collective bargaining. As in the steel industry last summer, labor and management generally agree that rises have occurred. Generally, too, workers share the benefits in the form of wage increases. But few in management or labor understand why it is so hard to agree on how fast productivity goes up, or on what makes it increase.

A long-awaited study of the steel industry has stripped away at least part of the mystery. The Bureau of Labor Statistics, which made the study, believes it throws important new light on productivity both as an economic force and as an issue between labor and management.

There's no surprise in the over-all finding: Productivity in steel has been rising at an average rate of 2.9% per year, measured in output per hour by production workers. This is about what less detailed studies had suggested.

• **Behind the Figures**—There are two major surprises, however, in what lies behind the averages:

• There are sharp year-to-year variations in productivity; a loss one year may be followed by a big jump the next, as in the chart for 1954 and 1955 (above). Sharp swings are a characteristic of productivity changes over the years; annual averages are therefore useless in trying to predict changes over the short run.

• The biggest factor in the wide year-to-year swings is volume production. The close relationship between volume and productivity is one of the major conclusions turned up in the study. The big gains in productivity never occur except when there is a gain in output. In the chart, such years are 1950, when there was a productivity gain of 9.1%, and 1955, when there was an 11.4% gain.

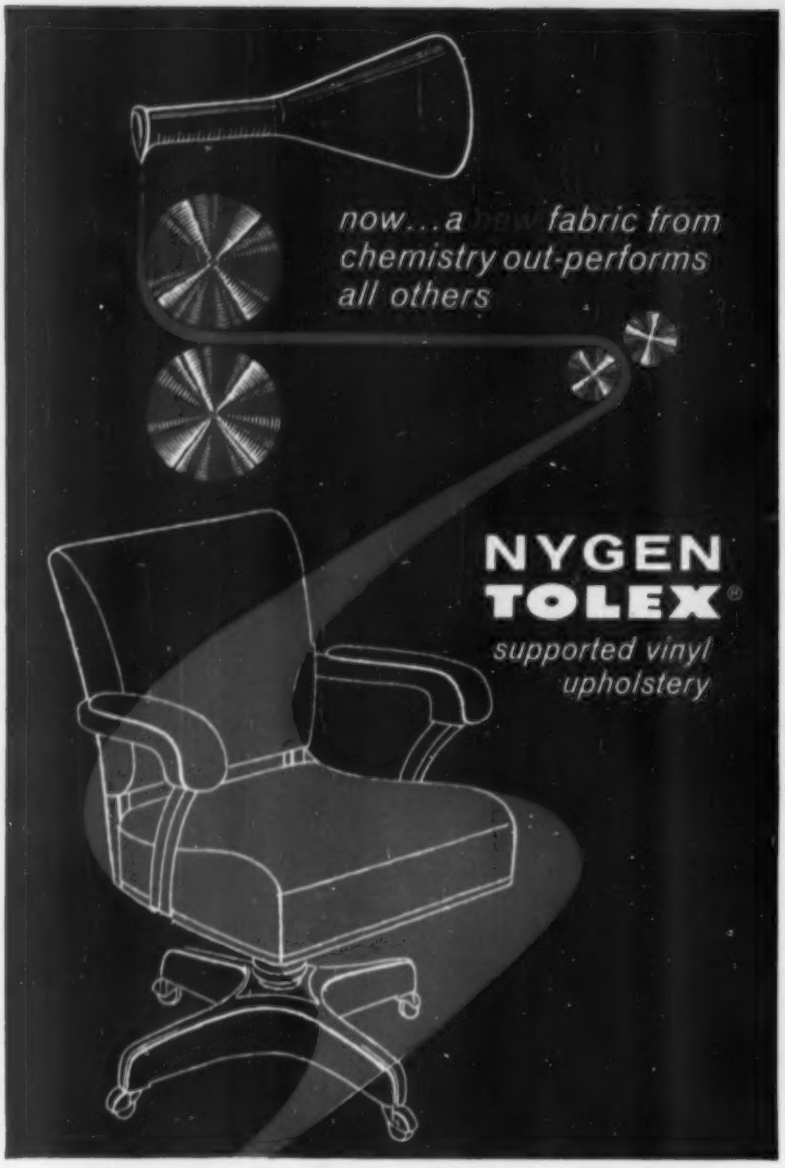
Behind the variations due to changes in output, technological advances play a steadier, less spectacular role. In light of the BLS study, they seem to accumulate consistently from year to year, without a major impact on output per man-hour, until there is a sudden leap forward in output.

• **Unsettled Issue**—Nothing in the report settles the traditional bargain-table issue of how much of the productivity gains is due to better workmen and how much to better machines. It offers no guidance as to how the economic benefits should be divided between owners, workers, or customers in the form of price cuts. But it does give the sharpest, most detailed picture of productivity in a major industry yet drawn.

• **Other Studies**—BLS officials have completed two other productivity studies that will be released soon. One deals with the effect of automation in a single large bakery; the other deals with the relation between productivity and the age of workers. This one is based on studies of four shoe factories and four clothing plants.

No industrywide studies of the steel type are now in the works, but officials hope to have some based on 1954 census of industry findings. They feel that the sharp variations in productivity gains revealed for steel probably occur in other industries, and that the only way to a sounder grasp of the problem is a series of detailed studies.

• **Pace Setter**—The steel study shows this key industry is about average for the economy, though on the whole it lags rather than leads. The 2.9% annual gain for steel is somewhat less than



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". . . if productivity lags, 1956 price increases will be followed by others . . ."

PRODUCTIVITY starts on p. 53

estimates prepared by the Federal Reserve Board for manufacturing as a whole. These run 3% to 3.5% for manufacturing from 1947 through 1953. Steel may have lagged slightly in the next two years, too. The Federal Reserve estimates indicate a 5% rise per year in 1954 and 1955 for manufacturing in general, while steel productivity dipped in 1954 and shot up in 1955, for a two-year average of 4.4%.

Even this two year average is misleading, however, for it hides the biggest single-year productivity gain chalked up by steel in 15 years—the 13-point rise on the index for 1955, which amounted to an 11.4% gain. There was a 9.1% gain in 1950 at the time of the Korean War production boost. Even larger single-year gains show up in the more distant past. In 1939, when production for World War II began, there was an 18% gain; in 1928, a 12.9% gain; in 1925, 13.6%; in 1922, 27.6%; in 1920, 27.3%. In the 32 years covered by the study, there were seven of these substantial annual gains; seven years showed losses; 18 years showed modest gains in output per man-hour by steel production workers ranging from a fraction of a percent upward.

• **New Light**—This wide variation throws new light on the problem of relating productivity gains to wage increases. At the time of the steel wage agreement last summer, for example, Commerce Secy. Sinclair Weeks said he was sure the increases were greater than productivity gains and would therefore have an inflationary effect on prices. The wage increases amounted to 7.6% the first year of the contract, 4.6% the second year, and 4.9% the third year. These are substantially larger than the long-term 2.9% average gain for productivity. Yet productivity gains comparable to those charted for wages between now and 1958 are not unusual in steel's history, and might occur over the three-year term of the present steel contract.

The point is an important one. If productivity increases substantially again this year, the price increases already put into effect by the industry to compensate for higher wages may stay where they are. But if it lags, then the price increases of the summer—described as "initial" by U.S. Steel—will probably be followed by others, covering the further labor-talk increases spread out over the life of the contract.

• **Charting the Course**—Three key factors will decide what course pro-



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". . . the outlook for productivity gains in the industry is rosy . . ."

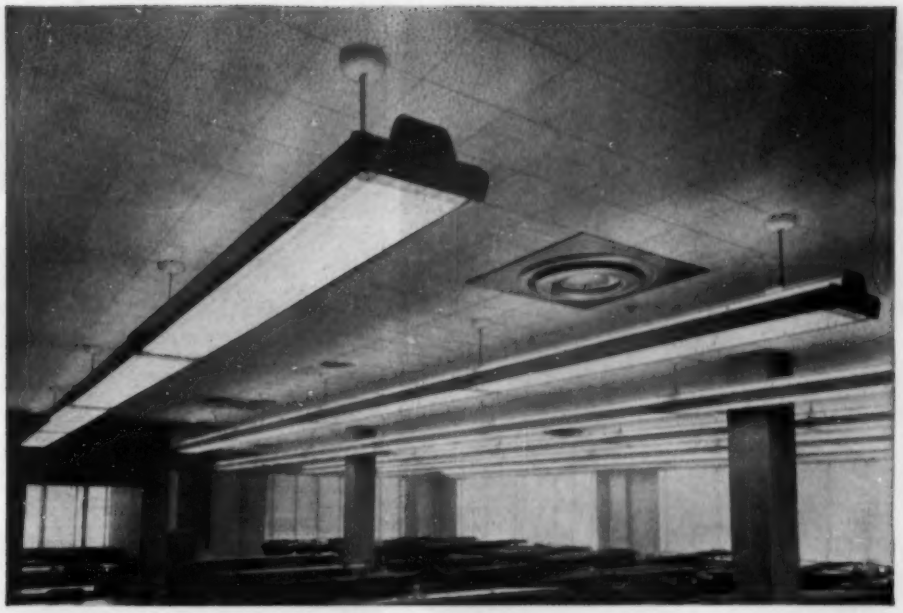
PRODUCTIVITY starts on p. 53

ductivity takes in the next few years, in light of what the BLS analytical study of the steel industry reveals about the past:

Management-labor relations will play a leading role, as they always have. The report points out that "adoption of technological improvements is enhanced by a work force which has the capacity and willingness to learn, to change, to adapt." Higher wages, pension programs, increased leisure, and incentive pay plans are cited as contributing to productivity increases in this indirect manner. The report stresses the revised job classification that went into effect in 1947 and 1948 as outstanding in this respect; it ended a long series of grievances and cut down on the amount of time lost from work. The three-year contract signed this year may also play an important role. The Iron & Steel Institute has pointed out that the no-strike agreement alone will result in a 5-million tons a year increase in production—representing the lost tonnage caused by walkouts in recent years.

General business conditions will largely dictate output, and thus affect productivity. The higher the percentage of capacity in use, the higher productivity will be. As long as the present combination of peak investment in new plant and equipment and peak consumer spending continue, the outlook for productivity gains in the steel industry will be rosy.

Technological improvements must continue to pave the way. Their effect is shown in long-range comparisons, whereas the effect of changes in output dominate the short-run. Output in 1949 was practically the same as in 1941, for example, yet productivity was 18% higher in 1949. Output was the same in 1929 and in 1937, yet productivity was 14% higher in the latter year. Increase in the size of blast furnaces is one of the chief technological improvements noted in the report in recent years. The growth in the number of electric furnaces in use was also cited. The substitution of electric motors for steam engines in rolling mills, a trend that began in the 1920s and picked up speed during World War II, has increased rolling mill output per man-hour. Continuous strip mills replaced the old hand mills, especially after 1939. Cold reduction mills that once produced 1,500 ft. of steel per minute now produce 4,500 and 5,000 ft. although they employ only the same number of men as on the slower mills. **END**



To quiet the block-long drafting room of St. Louis' LaClede-Christy Corporation, a ceiling of Armstrong Full Random Cushiontone was installed. It is easy to clean and stays new looking for years. The surprisingly low cost of Cushiontone makes it economical to sound condition large areas.

How much does sound conditioning cost?

The price of sound conditioning varies, but businessmen everywhere consider it a sound investment

The need for comfortably quiet working conditions is prompting many employers to investigate the advantages of noise-quieting ceilings in their office areas. But because acoustical materials come in such a wide range of prices—anywhere from $0.30 to $1.50 per square foot installed—it's often difficult to know how much to spend for adequate sound conditioning.

The price of sound conditioning is not based on its effectiveness alone but rather on a combination of special product features, such as appearance, fire-safety, and ease of upkeep. Local labor conditions help determine the cost of the finished job. And the job size, as well as its location, has an important bearing on final costs, too.

In St. Louis, for example, the LaClede-Christy Corporation desired a low-cost, easy-to-clean material to quiet their 30,000 square foot drafting room. Their choice was Armstrong Full Random* Cushiontone, an attractive, economical wood fiber tile. Cost for the finished ceiling was around $9000—or about 30¢ a foot.

On the other hand, distinctive beauty and fire-safety were the reasons Armstrong Travertone was installed in the office of the president of the Breeze Corporation in Union, N. J. A naturally textured mineral wool tile, Travertone is incombustible. Since the suspended ceiling was in place, total cost for installing 870 square feet of Travertone was $547—or 63¢ a foot.

The complete line of Armstrong sound-absorbing ceilings is installed by Armstrong Acoustical Contractors, trained men who can help you select the right material for your requirements. You'll find an Armstrong Acoustical Contractor listed in the Yellow Pages of the phone book. He'll be glad to give you complete details on product features plus a free job estimate, without any obligation.

For the free booklet, "Quiet at Work," write Armstrong Cork Company, 4210 Indian Road, Lancaster, Pennsylvania.



Beauty, as well as quiet, was required in this Breeze Corporation executive office. The Armstrong Travertone acoustical ceiling offers both, plus a valuable measure of fire-safety.

Armstrong

ACOUSTICAL MATERIALS

Cushiontone® • Travertone* • Crestone®
Minatone® • Arrestone® • Corkoustic®
Perforated Asbestos Board

* Trade-Mark



Hot spray. Film-thickness gauge measures single coat of paint sprayed hot. Gauge reads 2.1 mils.



Cold spray. One coat of the same paint sprayed in conventional manner measures only .8 mils.

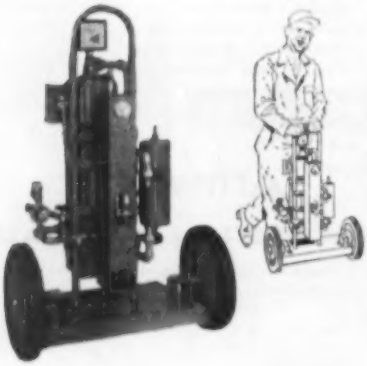
Film-thickness gauge reveals DeVilbiss hot spray puts on more paint per coat!

Each of the steel panels in the test above was sprayed with a *single coat* of black vinyl paint. But the results measured on the film-thickness gauge show one important difference – the paint on the hot-sprayed panel is nearly three times heavier than that on the one sprayed by ordinary methods.

By the controlled application of heat to the spray material, DeVilbiss hot spray gives you heavier film build . . . even with standard formulations.

What's more, materials can be applied efficiently at far lower spraying pressures, greatly reducing spray fog, and resulting in up to 50% savings in material. Finishes dry faster; shrink less; come out glossier. And because fewer passes are needed, operator fatigue is cut way down.

DeVilbiss hot spray is usable on all types of products; can be your means to better finishes at lower costs. For facts on just how much DeVilbiss hot spray can save *you*, call your nearest supplier now! Or write for Bulletin F-286.



Hot spray goes to the job —anywhere—with this new DeVilbiss Portable Paint Heater! Self-contained on easily moved truck, it is complete with automatic controls. Heat-jacketed hose —available in lengths up to 50 feet—keeps paint hot right up to the gun. Write for Bulletin IE-1148.

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Making Charity Painless

Bell Aircraft employees' association collects funds through voluntary weekly payroll deductions, avoiding plant solicitations. Everybody benefits.

During the past five years, employees of Bell Aircraft Corp.'s Niagara Frontier Div. have contributed $630,000 to organized charities—all of it without the lost time and confusion that often create problems for management during plant charity fund campaigns.

At Bell Aircraft, as in an annually increasing number of plants nationally, funds for approved charities are collected through a payroll deduction plan. The idea is an old one; similar collections have been made for as long as 15 years, and variations of it have worked successfully in Birmingham, Ala., among other places. However, the Bell technique is unique enough to make it of current interest to any employer wondering how periodic drives for funds can be eliminated in his plant.

• **Bell Humanity Fund**—Bell's Niagara Frontier employees have their own self-administered association to handle the collection of funds through a payroll deduction plan, and the distribution of funds to organized charities in western New York. Membership is voluntary, but more than 90% of all employees belong to the association and have approved the checkoff.

The charity organization has two sections—one for employees who are represented by a union, the other for those who are not. Each section designates 10 employee trustees. During the past five years, 45 employees have served terms as trustees, in keeping with a policy of a steady turnover of administrators.

The trustees apportion the Bell Humanity Fund to approved charity agencies on a basis of (1) their demonstrated need for funds, and (2) their location. Agencies in Buffalo, Tonawanda and North Tonawanda, Niagara Falls, and Lockport, N. Y., can benefit, with the share of funds going to any community to be determined by the number of Bell employees living there. During the past five years, more than 100 agencies have benefited by the fund.

The trustees are also charged with paying regular visits to agencies receiving aid or asking for it, to keep in close touch with their work.

• **Who Gets the Funds**—Since 1951, the Bell Humanity Fund's first year, the Community Chest has received a total of $278,000 in Buffalo, $45,000 in Niagara Falls, $42,000 in the Tonawandas, and $12,000 in Lockport. Other organizations, such as the Red Cross, Cancer Fund, and Heart Fund, have received substantial aid—with the amounts set on the Bell employee residence basis.

At the outset of the Salk vaccine program, the association voted to give $25,000 to the Buffalo Children's Hospital to provide free vaccinations for underprivileged children in the area. When the government made vaccine available for children, without cost, the Bell association asked the hospital to keep the $25,000 grant to establish a virology laboratory. Later, the association allocated an additional $6,000 to this project.

The Humanity Fund has also provided station wagon ambulances for the Crippled Children's Guild and the Salvation Army. It donated a machine to help continue the pumping action of the heart to another hospital.

• **How It Grew**—When the Bell Humanity Fund was established, about 50% of the Niagara Frontier employees of Bell Aircraft signed membership and checkoff cards; they approved payroll deductions that totaled $50,000 the first year.

Now, with 90% of all Bell Aircraft employees enrolled, payroll deductions amount to approximately $150,000 a year.

• **Popular Project**—Everybody seems pleased with the plan, supervised generally by J. Copeland Gray, former member of the National Labor Relations Board.

Management is delighted, because charity fund drives no longer create problems in the Bell plant; work isn't slowed down several times a year while solicitors and drive captains from the work force collect funds from employees in the company's plant and offices.

Employees like it because they can give a constant amount—say a half-dollar—out of their weekly paychecks during the year, thereby doing their bit without being hit for a big contribution several times a year.

The charities like it because they now get more money out of Bell Aircraft employees than they ever did in plant and office solicitations. There's only one possible drawback; the agencies feel that they now collect less at the workers' homes. END



An air compressor that runs well can fool you into thinking, "It works well, too!" Fact is, it may be running far more than it should, and inflating your compressed-air costs way out of proportion. That's because current consumption is the major expense item for compressed air.

A simple test with your own watch quickly and accurately tells if you'll be money ahead to install a new DeVilbiss compressor now. You may find that you are already paying for a new compressor through too-high operating costs!



DeVilbiss air compressors in horizontal or vertical models, ½ to 15 hp.

What To Do

Phone your DeVilbiss jobber today for the DeVilbiss Compressor Catalog CL-b, containing the simple test that you can make yourself, using your own watch.

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In Labor

• • •

State Employers Claim Victory In Unemployment Compensation Ruling

The Pennsylvania Supreme Court last week denied unemployment compensation to 23,000 workers involved in the 22-week Westinghouse Electric strike.

John R. Torquato, secretary of labor and industry in the state's Democratic administration, ruled last winter that idle Westinghouse workers were eligible for UC because the company rejected an arbitration plan offered by Gov. George Leader. Torquato said this turned the walkout into a lockout—during which UC is payable.

The state Chamber of Commerce, joined by 94 employers, contested Torquato's ruling (BW—Apr.7'56, p150). The Chamber hailed last week's court decision as a victory for Pennsylvania employers, and said it prevented an "unjustified 'raid' on the UC fund, which might have amounted to as much as $9.5-million."

• • •

Rubber Workers Reject Proposal To Shift to Longer Work Day

United Rubber Workers top officers ran into a stone wall last week when they tried to steer URW's 20th convention away from the rubber union's traditional six-hour day to an eight-hour day. URW's policy committee favored a "gradual transition" to the longer day.

All Akron rubber plants, Firestone's plant in Los Angeles, and U.S. Rubber's Detroit factory work a six-hour day, six days a week. The rest of the industry works five eight-hour days. Advocates of the "gradual transition" to an eight-hour day say that URW must establish uniform hours and wages in the industry before the union can set its sights on the long-range goal of a shorter work day and a shorter work week.

Debate on a resolution favoring a shift to the eight-hour day was heated. **It stemmed in part from the fact that many rubber workers on the six-hour day hold down two jobs in different plants; they fear that a longer day would force them to drop one job, at a loss of income.**

• • •

Supreme Court Agrees to Review Additional Labor Rulings

The U.S. Supreme Court, which already had a heavy load of labor cases scheduled for argument this term (BW—Jun.23'56,p155), this week accepted even more. The court:

• Granted a National Labor Relations Board request for review of a lower court decision that a strike called by a Teamsters local against one member of an employers' association during deadlocked bargaining with the association did not make a lockout of employees by other association members legal.

• Agreed to rule on three cases—which split lower courts—hinging on whether federal courts have jurisdiction to compel employers to comply with arbitration clauses in labor contracts.

• Agreed to review a decision that the Olin Mathieson Chemical Corp. violated Taft-Hartley by changing its seniority policy—after an unsuccessful strike—to give preference to nonstrikers and employees who returned to jobs during the walkout.

• Granted an appeal to Negro railroad employees who are trying to upset a decision that federal courts haven't authority under the Railway Labor Act to enjoin enforcement of a contract clause requiring Negroes and whites to belong to separate union locals.

• Agreed to rule on a challenge to the constitutionality of Wisconsin's "Labor Peace Act" by a Teamsters local.

• • •

Canada's Catholic Labor Group Prepares to Link With CLC

The Canadian Catholic Confederation of Labor has voted in favor of "the principle of affiliation" with the merged, 1-million-member Canadian Labor Congress.

By a near-unanimous vote—a half-dozen delegates from white-collar groups dissented—CCCL's annual convention in Montreal two weeks ago instructed officers to resume unity talks with the CLC's Pres. Claude Jodoin. The CCCL officers will report back to a special convention to be held next June.

If the affiliation goes through, CCCL will enter the Canadian federation—counterpart of AFL-CIO—as a 100,000-member national union, on an equal footing with other CLC affiliates. It may drop the word "Catholic" from its name, and would give up independent representation on various federal administrative and advisory boards and in international labor bodies.

• • •

Labor Briefs

Wages of an estimated 600,000 Southern textile workers, mostly in nonunion plants, went up a dime an hour this week. The increase, which reflects a growing optimism about the textile outlook, was given initially by J. P. Stevens & Co. in 35 mills, spread through other chains. **The Textile Workers Union of America called the increase "welcome but inadequate," moved to reopen its contracts.**

A new round of wage bargaining is in prospect for the oil industry in early 1957. The Oil, Chemical & Atomic Workers wage-policy committee will meet in Denver Dec. 7 to plan a drive for "substantial general wage increases" warranted, the union says, by the increased productivity of oil workers and the earnings of companies.

Shipyards and their unions on the East Coast are settling for immediate 18¢ raises, another 9¢ an hour payable in 1957, and a wage reopener in 1958. Todd Shipyards signed a new contract with the Marine & Shipbuilding Workers on these terms, Sun Shipbuilding & Dry Dock with the Boilermakers.

You can hang it from the ceiling--





hide it away in unused corners--

install it in a back-room--





cool it with water--



or use no water at all--

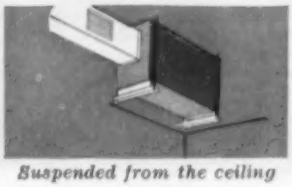
FRIGIDAIRE

LOW COST CUSTOM COOLING

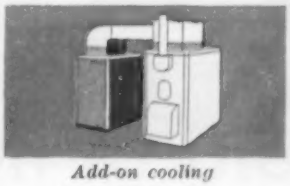
is so very flexible!



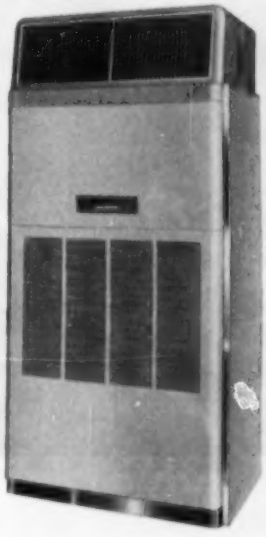
A complete duct system



Suspended from the ceiling



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There's 4-way flexibility with Frigidaire Custom Cooling: *location, capacity, cost* and *type of installation.* Frigidaire systems can be designed to meet your needs exactly—to fit your space with compact, self-contained units or with remote systems installed out of sight, out of mind. Wide range of capacities—2 to 15 tons.

Cost? Lower than you think when you can select just the *right* system, nothing more. And if water is scarce or costly in your area, optional air-cooled equipment is available.

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Call your Frigidaire Air Conditioning Dealer now. He's listed in the Yellow Pages. Let him show you how Custom Cooling can give a boost to your business through new customer comfort and improved employee morale. Or write FRIGIDAIRE DIVISION, *General Motors Corporation,* Dayton 1, Ohio. In CANADA, Toronto 13, Ontario.



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A DAY

in the lives of a quarter of a million people

More than 240,000 people keep Cities Service, one of the world's largest oil companies, operating at full steam . . . 240,000 people who locate, produce, refine, improve, market and invest in the petroleum that constitutes any oil company's lifeblood.

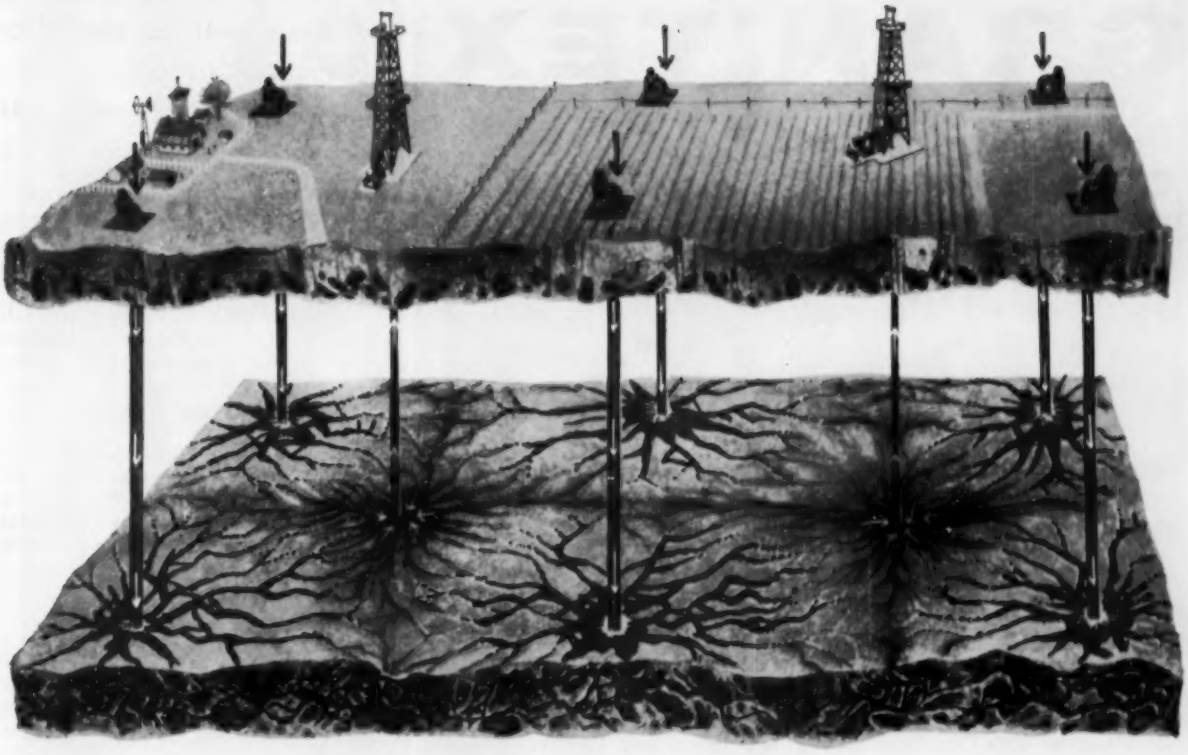
A winning team? Judge for yourself: Today, Cities Service is pushing forward in ever longer strides, with new refining facilities and techniques, new oil discoveries, new pipelines and tankers, new dealers, and new and improved petroleum products, unsurpassed in quality.

Moreover, the very fact that this surging activity exists, serves to assure further expansion . . . for healthy growth stimulates still more growth.

And significantly, this growth is more than the sign of a healthy company . . . it's living proof of a healthy country. For it again demonstrates the rich harvest of a system in which government, industry, and all citizens share an interest and an obligation toward each other.

CITIES SERVICE

Progress through Service



Modern oilmen don't stop with drilling oil wells. They also use abandoned wells to drive water (above) or gas down into the oil fields and build up underground pressures. The drawing shows one way of . . .

Pushing More Oil to the Wells

These days, it's not enough to find underground oil reserves or to take off the oil that flows readily to the surface under pumping. Exploration costs are high, and getting higher; an oil producing company can no longer afford to take what comes easily from a field and move on to a new area. The emphasis must be on getting the greatest possible yield out of each field.

Oil conservation laws have controlled the most strikingly wasteful drilling and production practices of the past; wells must be scientifically spaced, and gases can be released only at specific rates. However, the standard methods of getting oil out of the ground are notoriously inefficient. They ordinarily yield only 20% to 30% of the total supply that's underground.

By using pressure maintenance techniques, such as water flooding (drawing above), the Interstate Oil Compact Commission says the nation's recoverable oil reserves could be boosted by a startling 40%. And there's room for much improvement. Only 19% of domestic crude oil now comes from fields where these techniques are used.

• **The Arithmetic**—According to an IOCC survey, the known oil fields of this country contain—or have contained—288.5-billion bbl. of crude. They will ultimately produce 94.5-billion bbl. using today's recovery method. This is only 32.7% of the oil that was originally underground. Moreover, 53-billion bbl. of this recoverable oil has already been used up. That leaves about 42-billion bbl. for the future.

Present recoverable crude oil reserves in the U. S. have been calculated usually at around 30-billion bbl. The IOCC estimate of 42-billion bbl. counts on a gain of 12-billion bbl. through wider adoption of the latest pressure maintenance techniques.

While the ultimate yield, according to IOCC, will be only 32.7% of the total 288.5-billion bbl., the new processes recover something like 50% of the oil, and one or two methods that are just going into field use appear to promise yields of from 60% up to nearly 100%.

• **Secondary Recovery**—In the early days when oil was plentiful near the surface of the ground, the practice was to deplete a field as far as possible using natural pressures and pumping—then abandon it. Later the oil companies returned and reworked these shut-down fields for a second crop of oil. This was termed secondary recovery.

Today, secondary recovery has a new

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Dustproofs, Oilproofs
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Now! Your plant can have clean, sanitary concrete floors, for Granitex seals concrete floors and produces a dustproof, oilproof surface that can be easily swept or mopped. No germ-laden dust can hide away. Floors treated with Granitex are morale-builders, too. Employees just naturally appreciate working on floors that are dustfree and attractive.

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Granitex contains Devran (epoxy resin) . . . new miracle ingredient that resists moisture, acids, alkali . . . and even shakes off rough, rugged traffic wear. Devran (epoxy resin) has been performance-proven in some of Truscon's most famous protective coatings . . . in all types of industry, under the most rigorous conditions.



A ball of pure Devran is more resilient than a golf ball . . . will bounce higher when dropped on a concrete floor. Devran enables Granitex to "bounce back" after being subjected to harsh treatment, both chemical and physical.

DISCOVER NOW, WITH NO OBLIGATION, HOW EASILY AND ECONOMICALLY YOU CAN HAVE CLEAN, SANITARY CONCRETE FLOORS . . . SEND COUPON TODAY!

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". . . oil companies tend more and more to turn the analysis over to the electronic calculators . . ."

STORY starts on p. 63

meaning. Because oil is harder to find and new wells must be drilled more deeply and more expensively (BW—May19'56,p115), it now makes sense to apply proved recovery techniques to a field from the beginning to squeeze the most out of it.

The idea today is to apply methods that conserve underground pressures from the very beginning. Even before the first well is brought in, oil company engineers start worrying about the problem.

In the new Golden Spike field in Canada, for example, gas is already being injected to maintain pressure, even though production men say they could count on natural flow for another 100 years.

I. What Makes Oil Run

"Reservoir engineering" is a term the oil industry now applies to the science of boosting the recovery rates for existing fields. It's not an easy science to practice.

First of all, oil reservoirs usually aren't literally underground pools of oil. The oil, along with gas and water, is trapped in the pores of rock and sand, often many thousands of feet below the surface. Conditions deep underground may vary laterally as well as vertically; what's geologically true in one corner of an oil field may not be true for another corner of the same field. So theory has to be backed up by the results of painstaking core-testing.

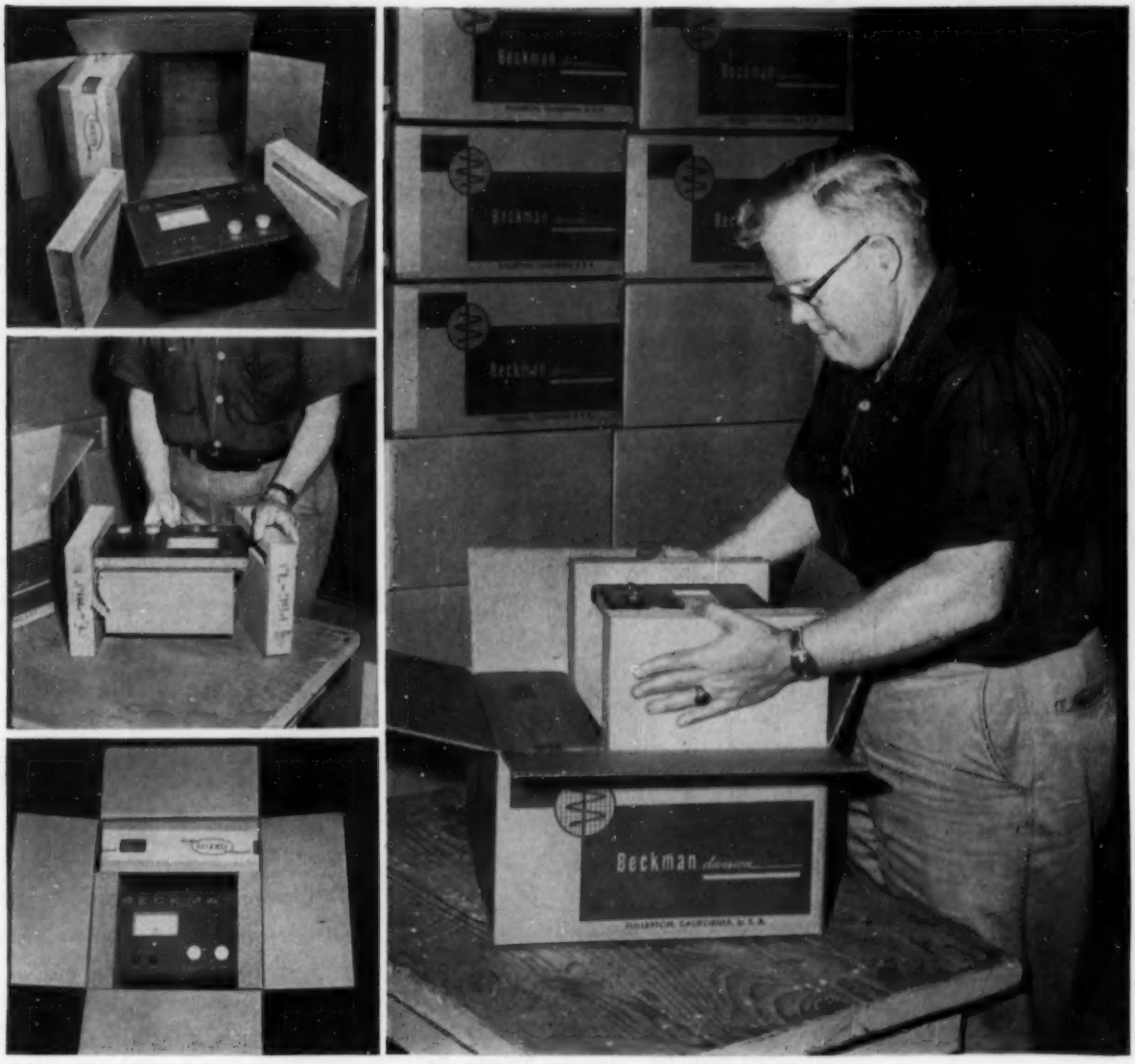
• **Need for Computers**—Collecting and analyzing data may take years. In one field alone, the Tulsa lab of Carter Oil Co. cut more than 4,000 cores and measured each for pore space, fluid content, and permeability, besides gathering data from electric well logs.

Creole Petroleum Corp. engineers studied data for four years before deciding how to get the best yield from the company's Bolivar Coastal Field in Venezuela.

Because the volume of data is so huge, oil companies tend more and more to turn the analysis over to electronic calculators. Carter, for example, is using a new oil pool analyzer developed by Esso Research & Engineering Co.

• **Natural Pressures**—The answer the reservoir engineers want, of course, is the best way to keep the underground pressures from fizzling out. There are four main pressures of this sort:

Dissolved gas drive. Gas dissolved in



Instrument maker quits old packing methods for CORRUGATED—saves 80% time, 15% materials cost

Saving money doesn't always come first in buying boxes. This maker of precision instruments wanted protection—thought only heavy, expensive containers could give it. But when he switched to corrugated, he discovered he got both.

Now his annual savings are impressive. The corrugated boxes themselves cost 15% less—even though they're better looking, give better brand identification, and protect better against dust and moisture. Packing time is reduced 80%. And lower shipping charges reflect the reduction of about 30% in package weight.

Customers like the corrugated boxes better because they're easier to open. No hammer or claw is needed. The instruments actually arrive in better condition. In fact, of the more than 3000 instruments shipped so far in the new corrugated boxes, not one case of damage in transit has been reported.

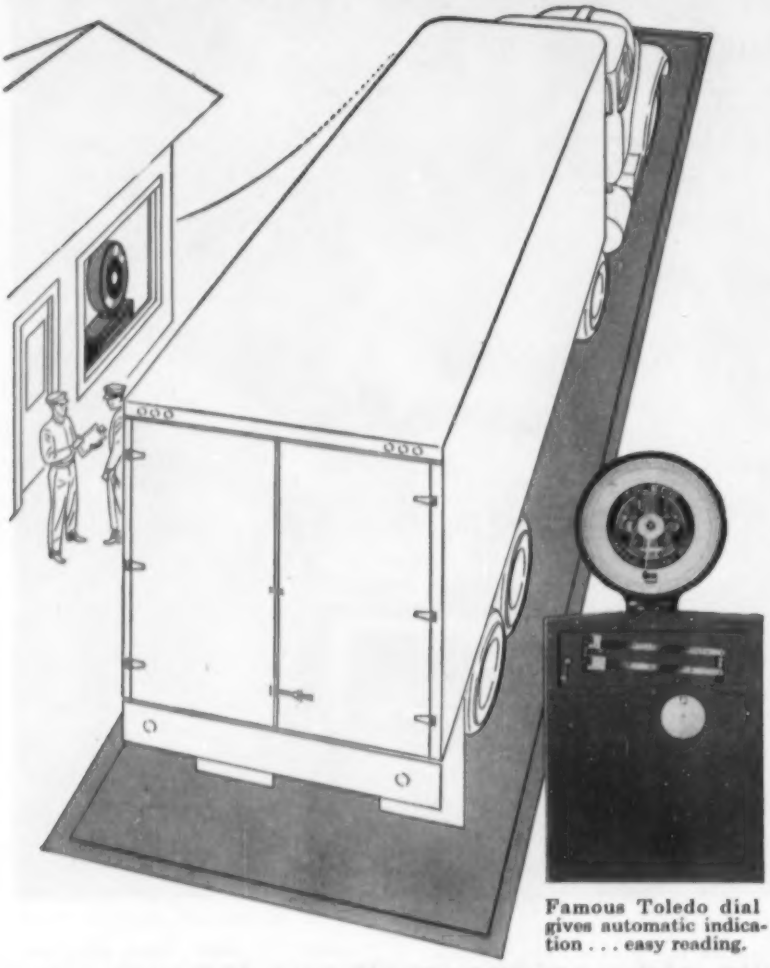
Here is more factual proof of how a company can save money by using corrugated containers. If you are now using old-fashioned heavy shipping containers—no matter how large or small your production volume—look into the advantages of corrugated boxes. Your nearby boxmaker is listed in your classified telephone directory under "Boxes—Corrugated."

Langston doesn't sell corrugated, only the machines that make it. Since 1902, these machines have led the field in efficiency and dependability. *Samuel M. Langston Co., Camden 4, N.J.*

THINK FIRST OF CORRUGATED

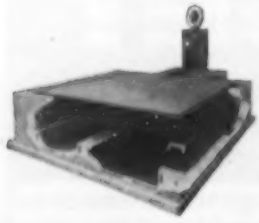
LANGSTON Corrugated Container Machinery

More and more trucks are weighed on TOLEDOS



Famous Toledo dial gives automatic indication . . . easy reading.

Big choice of sizes to 60 ft. . . . rugged dependability . . . automatic indication



HI-WEIGH AXLE LOAD SCALES
Check load distribution and axle weight. Thrifty shallow pit installation. 20 ton capacity with 8' x 10' platform or 30 ton with 10' x 10' platform.

Avoid loss of profits and good will, caused by "doubtful" weights. Weigh on Toledo Hi-Weigh Truck Scales and know *your load*. Advanced TOLEDO engineering features integrated lever, weigh-bridge and pit for brute-strength with long-life accuracy. Full range of capacities to 60 tons. Choice of two-section, four-section or axle load scales, all available with TOLEDO PRINTWEIGH that records weights on tickets, strips or sheets. Ask the local Toledo office about them, or send for literature. Request form 2417. Toledo Scale Company, Toledo 1, Ohio.

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". . . oilmen are still debating how much more oil the newer processes can get out of the ground . . ."

STORY starts on p. 63

the oil under pressure, like the bubbles in carbonated water, expands when the underground pressure is released at the well that's drilled. The expansion of gases then pushes the oil to the well.

Water drive. A similar release of underground pressure when a well penetrates the oil reservoir will bring water pressing in to drive the oil and gas toward the well.

Gas cap drive. Gas under pressure in a dome over the oil reservoir expands to push the oil through cracks in the rock to the well.

Gravity effects. The fact that oil seeks to float on top of water, and gas seeks to rise above oil, can help to move oil up a sloping reservoir to the well.

The longer a well is in operation, the weaker these natural forces become. In its simplest form, pressure maintenance is merely the injection of gas or water to revive these forces in the oil reservoir, thus to maintain an oil field's natural energy level. However, in more complex ways, the oil industry hopes to break loose oil supplies that aren't yet affected by present primary or secondary methods of recovery.

II. Opening the Pores

Oilmen are still debating how much more oil the newer processes can get out of the ground. The IOCC report says it's reasonable to guess that no more than 75% of all the oil in the ground is recoverable at best. Others claim new, radically different processes can recover up to 100% of the oil.

Some of these processes work from the angle of washing the oil loose from the oil-bearing rock by using acids or detergents; others work from the angle of building up pressures or thinning out the oil so it will flow.

• **Water Flooding**—Even the oldest recovery techniques aren't very old. Water flooding, though not used until around 1930, was discovered by accident in the Pennsylvania fields in the late 1890s.

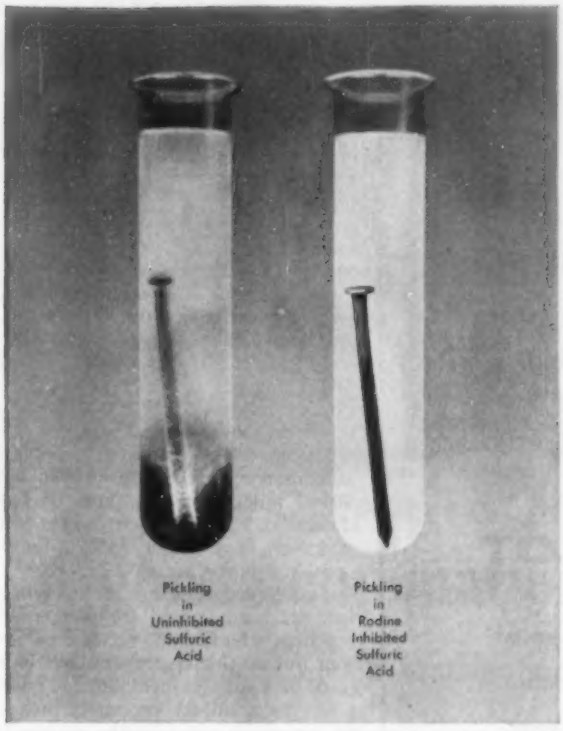
This technique calls for injecting water by pumping it down wells, either around the periphery of a field or in a pattern in the field itself. The injected water rebuilds the natural water drive or replaces other underground forces to sweep or push oil to the producing wells. Both salt water and fresh water are used, though salt water is regarded as preferable.

Water flooding in the Dominguez

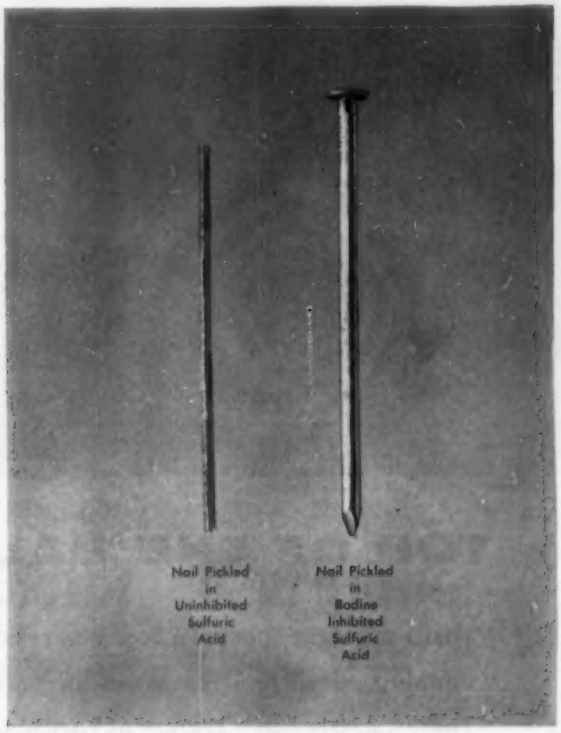
HOW RODINE® CUTS PICKLING COSTS

Tests demonstrate the effectiveness of Rodine in retarding the attack of acid on the metal

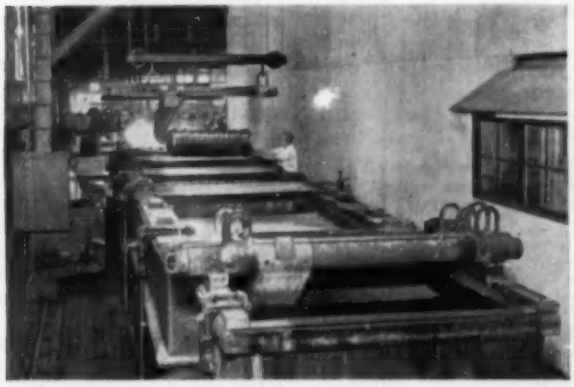
Rodine pickling acid inhibitors retard the attack of the acid on the metal without affecting the ability of the acid to remove scale. Their effectiveness in saving acid and metal is demonstrated by these two simple tests:



Formation of Hydrogen Test. Both test tubes contain a 10% by volume solution of sulfuric acid. In the left-hand tube, the acid is uninhibited. In the right-hand tube, a Rodine inhibitor has been added in an amount equal to 1% by volume of the concentrated acid. There is no bubbling in this tube—Rodine has retarded the formation of hydrogen that is the result of acid dissolving steel.



Loss of Weight Test. Both nails have been pickled in a 10% by volume solution of sulfuric acid for the same length of time. The nail pickled in the uninhibited sulfuric acid solution has lost its form, does not look like a nail any more. The nail pickled in the sulfuric acid solution with Rodine added has lost little weight, has retained its shape and luster.



Rod and wire, tube and sheet are pickled clean with Rodine, without wasting either acid or metal—there are fewer rejects, which means big savings.

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". . . the gas used in these processes is different from that in the older recycling method . . ."

STORY starts on p. 63

field near Los Angeles is credited with raising daily output from 600 bbl. to 2,800 bbl. Still, this process is not always the answer. Water may not be available in the quantities needed, and even when it is available, some other method may seem better.

• **Gas Repressurizing**—Creole's Lake Maracaibo operation in Venezuela is a case in point. Creole's engineers considered three possibilities: (1) doing nothing, (2) water flooding—and salt water was available in abundance, and (3) gas repressurizing, the other major form of pressure maintenance that's widely used. And the third choice won out.

Gas repressurizing consists of separating the gas from the oil at the surface and then putting it back in the reservoir's gas cap. If the reservoir also allows strong gravity effects, gas injection leads to recoveries of 40% to 80%. The improvement was promising enough for Creole to build a unique $20-million gas conservation plant on 350 concrete piles 7 miles from the shore of Lake Maracaibo. Creole engineers conservatively look for a 33% improvement in recovery.

• **Gas Recycling**—Another technique that has been around for years is gas recycling. Here again, gas is separated from the oil that's produced and is injected back into the field, but the object is not to maintain pressure. Instead, the aim is to vaporize the oil underground and "sweep" it to the well.

This is done by injecting a dry gas, which encourages the oil to vaporize into it. That's why the method is also called retrograde vaporization. One drawback is that only the lighter ends, the more volatile components, of the oil are vaporized, leaving the heavy residual oils unrecovered.

• **Condensing Gas Drives**—The newer "condensing gas drives" have an opposite aim from gas recycling. In their four or five variations, they are termed solvent-type recovery methods. The gas used in these processes is different from that in the older recycling method. Instead of being dry, ready to absorb the volatile elements of the oil, the gas is enriched with the lighter petroleum fractions, such as ethane, propane, and butane.

The enriched gas, injected in the oil reservoir, is absorbed by the oil. This thins out the oil, makes it less viscous and more ready to flow to the well. Under favorable conditions, the process



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"... the industry has always seen a need for better recovery methods, no matter how costly ..."

STORY starts on p. 163

boosts recovery to the 60%-80% range, and some even talk of approaching 100%.

Last month, the Texas Railroad Commission gave Humble Oil & Refining Co. a go-ahead on its plan to use a condensing gas drive in its Bronte and Seeligson fields. Humble doesn't pinpoint its gain, but engineers talk of recovery in the 60% to 100% bracket.

Humble has two variants of its process. One way is to pump enriched gas into the field; the other is to inject liquid propane, following up by dry gas to sweep the propane and oil mixture to the producing well. The precise difference between the two systems isn't clearly understood yet, and some oilmen think it's pretty much a matter of doing the same thing by two methods.

Atlantic Refining Co. has had a patented High Pressure Gas Injection Process under test since 1949. This is another solvent process, but it involves injecting the gas at fairly high pressures. Thus, it is applicable only to the deeper reservoirs that have the higher bottom-hole pressures. Atlantic says that use of this method has raised production in its Crane County (Tex.) field from 3,600 bbl. to 15,350 bbl. a day.

• **Heating It Up**—A radically different process is the thermal recovery method that's being tested by several oil companies. Standard Oil Co. of California is trying it at a 2,000-ft. level, while General Petroleum Corp. is experimenting in a shallower zone, at 700 ft.

The idea is to set fire to oil at the bottom of an air injection well, generating heat and pressure to force the other oil to the producing wells. The underground combustion warms up the nearby oil, makes it less viscous, and the pressures that are created help to move the oil. The burning is controlled by the amount of air pumped down the well by a 600-hp. compressor. Proponents of the system say that no usable oil is wasted, that only the heavy residual oils are burned off.

• **Yet to Be Justified**—All of the newer techniques are still in the testing stage, both for engineering and economic feasibility. Oilmen are, at the moment, most interested in seeing what can be done. The industry has always seen a need for considering better recovery methods, no matter how expensive they may look today.

And it looks pretty certain that, with the brainstorming that's being done in

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Shown above is new 15" drill press introduced by Delta, world's largest drill press manufacturer, at recent Metal Show in Cleveland. New Delta combines power tool *versatility* for a wide range of general and special operations, with big machine *ruggedness* for lasting accuracy through years of production line use. It also offers important new safety and convenience features found in no other 15" drill press. Typical of the Delta line, new 15" drill press is designed to supplement—or replace—expensive single-purpose machines on many jobs in metalworking and general industrial plants and woodworking shops. Write: Delta Power Tool Division, Rockwell Manufacturing Company, 540K N. Lexington Ave., Pgh. 8, Pa.

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oil research laboratories everywhere, there will soon be a wider variety of still more intricate and spectacular ways to wring the nation's oil reservoirs dry.

PRODUCTION BRIEFS

Air instead of oil is used as a feed stock in Esso Research & Engineering Co.'s latest pilot plant for oil processing engineering at Linden, N. J. The five-story plant eats up 8,000 cu. ft. of air per minute. It yields no end products, but tests fluidized solids techniques for suspending catalysts in gasoline reactors. Esso scientists found that air served adequately as an oil feed stock substitute in the project—and made much less mess.

•

High speed and short flight time will make it practical for jet transports to use inertial type navigation systems, according to an official of North American Aviation's Autonetics Div. Inertial navigation reacts to acceleration of the aircraft, and is independent of wind velocity, radio, or visibility conditions. But since errors build up with time, its use has not before seemed practical in most applications involving long-distance flight.

•

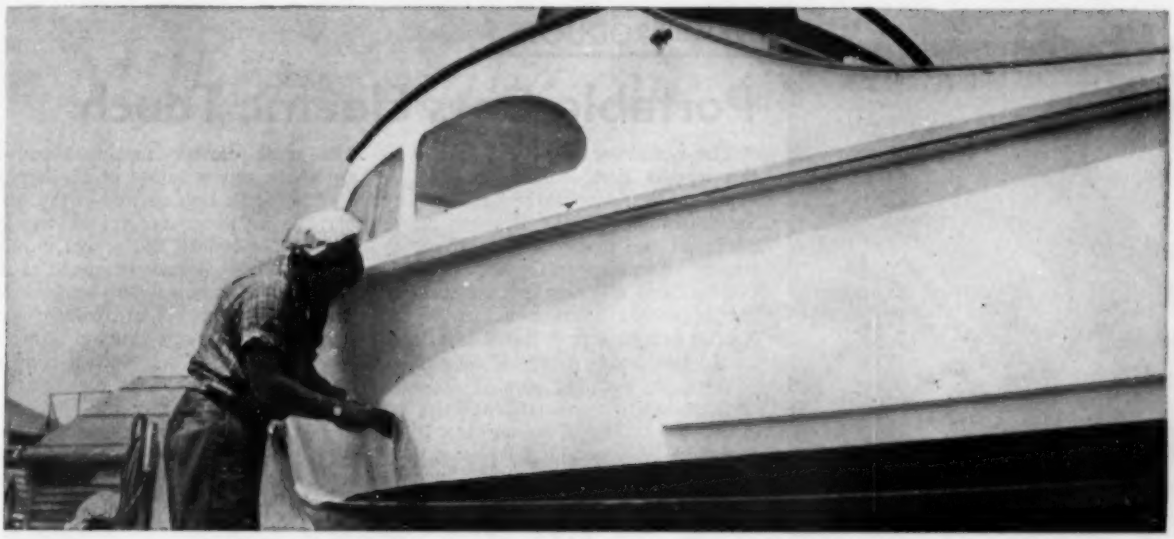
Cooled by gas: The first large gas-cooled power transformer for 69,000-volt service on electric transmission lines will soon serve Consolidated Edison Co. of New York. General Electric Co., the manufacturer, says the gas cooling and insulating system, product of about 10 years of research, is safer, less noisy, and lighter than conventional oil coolers. The sulfur-hexafluoride gas is nonflammable; so larger transformers can be used in interior spots previously limited to the dry type units with 15,000-volt ceilings.

•

Rapid growth of urethane foams is pushing du Pont into adding $500,000 worth of buildings and equipment to its new Elastomers Laboratory, completed only last spring. The newer facilities will be ready by next spring to mix and fabricate rigid and flexible foams in pilot-plant volumes.

•

Truck tires made of synthetic rubber that duplicates the structure of natural rubber have passed Army Ordnance tests. The tests, according to B. F. Goodrich, show the manmade variety gives better performance in tread wear, resistance to cutting, and tire life than standard truck tires of natural rubber. Goodrich calls its "synthetic natural" rubber Ameripol SN. It has been making pilot quantities for over a year.



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Portable Gets Electric Touch



The typewriter at the left, said to be the world's first electric portable, is about to be put into production by Smith-Corona, Inc., of Syracuse, N. Y. Although the typist will still have to return the carriage to the starting position by hand, the new unit has most of the important features of its bigger electric brothers. It is fast, has a light touch, and makes many carbon copies.

While the machine is aimed primarily at the home use and student markets, it can also be useful on business trips. It weighs 19 lb.–about 4 lb. more than other Smith-Corona portables.

• **Electric Extras**–The new portable–like most electric machines–permits automatic repeat action of the hyphen and underline keys, as well as the space bar. To do these repeat jobs, the key is held down until the proper number of impressions have been made. Automatic repeat action is also available on special order for any or all keys. As a safety feature, when the top panel of the machine is raised for adjusting or cleaning ribbon or keys, the power is automatically shut off.

The new electric portable operates on regular 110-volt, 60-cycle alternating current only. It will be available in four colors, will cost a little under $200.

Atom Clock Polices Frequencies



A new atomic clock–the Atomichron –that is expected to measure time with an accuracy of 1 sec. in 3,000 years is being produced by National Co., Inc., of Malden, Mass. The unit is not a laboratory device but a commercial product that will be used in television, navigation, and other jobs.

Heart of the clock's operation is a 5-ft.-long steel vacuum tube containing cesium. When the unit is on, some of the cesium is vaporized and the gas is made to oscillate at its natural frequency of 9,192.631,830 megacycles (millions of cycles) a second. Since cesium gas in this state will always vibrate at that frequency, the atoms can be said to act as a super pendulum. That is, their predictable action can be used as a constant time standard.

• **Applications**–In an important application–radio and television communication–the Atomichron will be used not only to give correct time but also to check on the frequency of the transmitting equipment. The checking up process becomes more and more important as new stations go on the air, because, if one station wanders off its frequency, it interferes with the operation of others. A unit like the Atomichron in the transmitting station keeps the television channel in its proper place in the broadcasting spectrum with less effort than is now needed. The channel wave band can also be made narrower so that more stations can go on the air.

As a timing device, the new machine can serve as an important auxiliary to the standard timer maintained by the Bureau of Standards in Washington. At present, the bureau periodically sends out a time checking signal by radio, and this is used as a standard all over the country. But having several atomic timers scattered in different areas, the bureau could help eliminate the possibility of a radio failure or static interfering with important time checking information.

As a starter, the Atomichron will help stabilize frequencies in a new long-range navigation system, called Navarho, developed for the Air Force. The new system with its exact frequencies is said to be accurate to within 1% at 2,000 nautical miles.

• **$1-Million Model**–At present there are five Atomichrons being used in Air Force and other military research, and another two are on order. And the unit is now available for commercial use. The atomic clock, which costs about $1-million to develop, is priced at $50,000. A mechanism for turning its output signals into regular time is an extra $1,500.

NEW PRODUCTS BRIEFS

A liquid level switch made by Teddington Industrial Equipment, Ltd., Sunbury-on-Thames, Middlesex, England, determines by thermal action when the level of the liquid drops in tanks, boilers, and other industrial vessels. It has no moving parts and is said to require no maintenance. The device detects the difference in the heat transfer between the sensitive element and the liquid, and the sensitive element and the vapor above the liquid.

•

Office machine connector for hooking together an IBM punch card system and a Burroughs billing machine has been developed by Systematics Inc., New York. It eliminates the costly and often error-producing process of translating information from cards to biller and back. Price $1,950.

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A Business With Sky-High Hopes

If ever an industry resembled the product it turns out, rocket making does. This industry has zoomed to a position of prominence in practically no time at all. And there's no telling when its speedy growth will stop.

No more than three years ago, the rocket engine field was tiny, specialized, and primarily experimental. A mere handful of companies employed a few thousand employees and did perhaps some $75-million worth of business a year. And rocket making stood in the shadow of the over-all guided missile business.

• **Coming of Age**—But today the manufacture of rockets is an industry—and a lusty one—in its own right. The rocket makers now employ over 25,000 people and annual sales run about $225-million. And they could easily top $1-billion in five years.

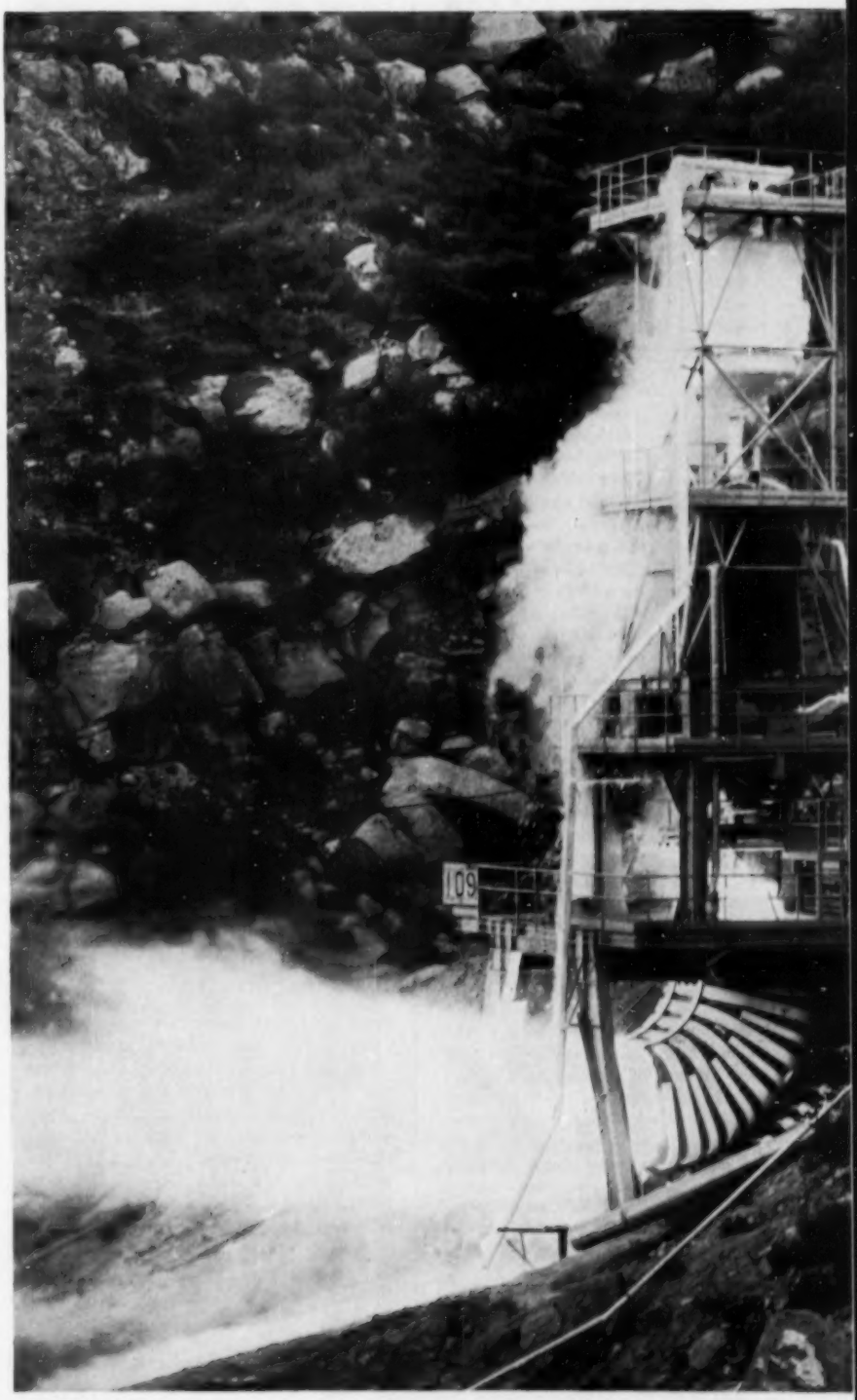
Rocket engines are primarily a military product today. But already a few of the leading companies are looking for civilian applications, have managed to find a few, and are optimistic they'll turn up a lot more in a few years. Some of them already are saying we'll be riding around in rocket-powered planes in a decade or so. There's a good possibility that rockets will team up with the ramjet or turbojet engines to move planes along at 2,000 or 3,000 mph. Jet engines cannot do this alone. Or rocket engines might be wedded to nuclear power.

• **Advantages of Rocket Power**—Compared with a rocket engine, the jet is a slowpoke. And it's because of the limitations of the jet engine that rocket engine manufacturing has spurted so spectacularly in the last three years. A rocket engine is the only power plant that can make missiles travel at speeds of 5,000 mph. to 15,000 mph. required by today's military strategy.

What's more, jets have to breathe air; and at altitudes of 20 miles, there is little oxygen. Rockets don't need oxygen; that's why all advanced guided missiles specify rocket power. And with the military putting more and more emphasis on the ballistic missile program, the rocket makers are riding high.

I. The Leaders

The leading figure in rockets today is Aerojet-General Corp., Azusa, Calif., a subsidiary of General Tire & Rubber Co. From a modest $2.5-million in 1946, its sales have zoomed to $70-million in 1955. This year they're ex-



TESTING STAND for rocket engines is in almost constant use at Rocketdyne's California lab as production of rocket motors is stepped up.

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EDWARD T. DICKINSON
COMMISSIONER OF COMMERCE

pected to shoot up to $140-million, and to $180-million next year.

And employment at Aerojet's plants and test facilities at Azusa and Sacramento has been multiplying just as fast. It now runs to about 8,500, but it is expected to move up to 12,000 next year and to around 14,000 to 16,000 the year after. And should any one of its many projects move out of the development stage and into production, employment—and sales—would take off on a new flight.

• **Organization and Acquisition**—Aerojet was organized in 1942 by five people under the guidance of Dr. Theodore von Karman, an internationally known aerodynamicist, who is still a consultant to the company. General Tire acquired the company in 1944.

When World War II ended, the small group of rocket specialists talked General Tire into extending the life of Aerojet. At first, the company's announced purpose was the production of rockets for military applications. But before long, Aerojet's scientists realized that they had latched onto a basic source of power with a raft of possible peacetime applications.

• **Military Business**—Over 90% of Aerojet's business still is military. The company builds rocket engines for the intercontinental ballistic missiles, for Army and Navy medium-range ballistic missiles, for sounding missiles to explore the upper atmosphere, etc.

But many of the 400 development prospects it has in the works are concerned with commercial applications. Aerojet's president, Dan Kimball, a former Navy Secretary, says that within 10 years commercial planes will move along at speeds of 2,500 mph. through a combination of rocket power and "something else." He won't say what else, but Aerojet has been exploring turbo-rocket motors for 10 years, also believes the rocket industry is in the same position as the electronics industry a few years ago, with nobody able to set limits on its future.

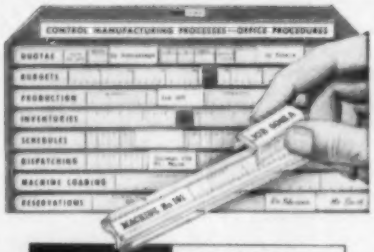
In line with its thinking, Aerojet has been sinking sizable amounts of its own money into peacetime development and research projects. It puts up the money for research and production facilities that logically could be supported by commercial business. Military customers foot the bill for the facilities needed for the expanded missiles program.

• **Broad Approach**—Its broad approach to rockets is one of the reasons behind Aerojet's fast rise in the field. In addition to tracking down commercial uses for the rocket, the company has been pushing development work in both liquid and solid propellant rocket engines. The other companies in the field have tended to specialize in only one type.



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". . . its broad approach to rockets is one of the reasons behind Aerojet's fast rise . . ."

ROCKETS starts on p. 77

Both types of rockets operate on the same principle: The fuel—solid or liquid—is burned with explosive force to generate hot gases that are forced from the rear of the rocket giving it forward thrust. But the similarity ends there. The solid propellant rocket is the simplest form of power; the liquid rocket engine approaches a jet engine in complexity.

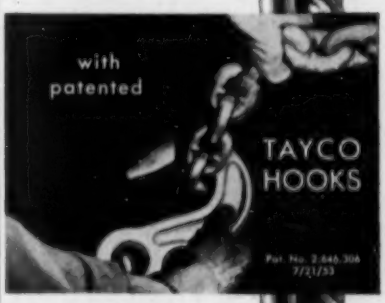
• **Solid Rocket**—Basically, a solid rocket engine is nothing more than a pressure vessel—like a shell case—that contains the fuel. The fuel can be in grain form, like powder in a shotgun shell, or it can be cast right in the case. By varying the composition of the propellant and the size and shape of the openings through which the hot gases are forced, these rocket motors can be made to perform at different speeds and over varying distances.

• **Liquid Engines**—Liquid rocket engines are much more complicated. Unlike the solid propellant rocket, the fuel and oxidizer are contained in separate pressure vessels and delivered under pressure to a firing chamber. Common fuels are gasoline, alcohol, ammonia, kerosene. Oxidizers are liquid oxygen, hydrogen peroxide, or nitric acid. Before the liquids are combined in the firing chamber they have to be carefully metered out to prevent them flowing back stream. This requires pressure control valves, special injector heads to deliver the fuel in the right amount—and at the right angle—to the combustion chamber. Some fuels mix instantly, but others need a starter. And for this, you need to add a fantastic amount of "plumbing" to the liquid engine. In all, the liquid rocket engine may contain hundreds of parts, all of them manufactured to extremely close tolerances.

The advantage of the liquid rocket engine is that it gives a greater thrust for a longer time. For a time, it appeared that only the liquid-powered rockets could do the job of pushing the big guided missiles through space. Solid rockets, on the other hand, are easier to handle and can be stored like live ammunition. Liquid rockets have to be handled with kid gloves.

• **Fruitful Research**—Through its dogged research, Aerojet has shown that solid propellants can be made to do jobs formerly reserved for liquid engines. W. E. Zisch, vice-president and general manager of Aerojet, maintains "there is no known missile requirement

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that excludes solid rockets." And it is an open secret in the trade that the military is turning more and more to solid rockets for all missile projects (BW—Mar.24'56,p101).

Currently, about 40% of Aerojet's business is in liquid rocket engines and about 35% in solid engines (the remaining 25% is split up among shaped charges, a thrust reverser for jet aircraft, architectural and engineering services, etc.). In solid propellants, about 20% of the work is development and 80% is production manufacturing. For the liquid engines, the figures are just reversed.

• **Auxiliary Power**—Through its early research work, Aerojet pioneered the development of the rocket as an auxiliary power source. And today it's the leading producer in this field. The best known of these rockets are the assist take-off units, called variously JATO, RATO, and just plain ATO. These units, either a cluster of solid rockets or several liquid rocket engines, put extra kick behind a plane's take-off, enabling it to get off the ground with a short run or with an especially heavy load. They are also used to start up jet engines at remote bases.

Right now Aerojet is modernizing its "Junior JATO" as a standby engine for small single-engine planes. The unit could prevent crackups by giving a plane a quick boost if the engine failed during a landing.

• **Rocket Sled**—Not all of Aerojet's rockets zoom off into the air. It has developed one that shoves test sleds mounted on tracks across desert bases at supersonic speeds. The sleds carry materials and equipment being tested for jet planes and missiles (BW—Jun. 30'56,p77). And the company is No. 1 producer of underwater rockets for torpedoes and rocket-powered bombs than can be dropped from airplanes onto submarines.

In all its work, Aerojet handles rocket making from start to finish. It researches and develops until it has hit upon the right mixture of propellants and the right type of motor to burn them in. Then it builds the motors, mixes the propellants, puts in the charge, and ships out the engines ready for use.

• **Production**—Aerojet carries on mass production of rocket motors at both its Sacramento and Azusa plants. Rocket components require matching to exceptionally close tolerances and forgings and weldings must be faultless. High strength materials required for rocket parts are difficult to work with. As a result, Aerojet has developed many special manufacturing techniques. One of them is the Aerojet-Barnhart process for cold-forming simple low-cost metal tubes as rocket chambers.

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Most of Aerojet's research and development work takes place at Azusa. The company's plant and test facilities at Sacramento sprawl over 20,000 acres of dredged-out gold lands in the American River. The Sacramento facility represents a cash outlay of $60-million, including $13-million for new liquid engine plant now being built. Of the total, at least $15-million is Aerojet's own money.

II. Up-and-Coming Rocketeers

Though Aerojet stands head and shoulders over the rest of the industry because of its over-all activities, it has a close rival in the liquid rocket engine field. Rocketdyne, a division of North American Aviation, Inc., probably has caught up with Aerojet on liquid engines, the only kind that it makes.

• **Fast Growth**—Rocketdyne keeps its sales figures to itself. But you can get an idea of the size of its operations from its payroll. The company employs close to 8,300 at its Canoga Park (Calif.) plant and its Santa Susana (Calif.) field test laboratory. A year ago the figure was 3,800.

Using capital investment as a measuring stick, Rocketdyne falls way below Aerojet. Value of buildings and equipment already up or in the construction stage comes to about $12.5-million. In addition, Rocketdyne operates a $13-million facility for the Air Force at Neosho, Mo.

Rocketdyne is deeply involved in this country's missile program. It is working on liquid rocket engines for all the biggest missiles, among them the Atlas and Titan intercontinental ballistic missiles, the Thor Intermediate range ballistic missile, the Army's Redstone missile, and North American's own Navaho cruise missile.

A fast-growing—though much smaller—rocket company in California is Grand Central Rocket Co. of Redlands. It was founded only four years ago by Charles E. Bartley, who previously had put in eight years at the Jet Propulsion Laboratory of the California Institute of Technology as head of the solid rocket section. Bartley got C. C. Moseley, board chairman and president of Grand Central Aircraft Co. of Glendale, to finance his venture.

• **Solid Business**—Grand Central concentrates entirely on solid engines. Its business is divided up just about equally among the three services. It also is offering Aerojet some competition on solid rockets for assist take-offs and emergency power sources. The company has about 300 employees now, but this may rise to 500 before the year is out. Its plant—at Mentone, 10 miles northeast of Redlands—is valued at about $1-million. Productive

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ROCKETS starts on p. 77

capacity has increased four times this year.

Grand Central's prestige got a powerful boost when it was tapped to build the third-stage rocket for Project Vanguard, the program for launching earth-circling satellites for scientific purposes. The third-stage rocket is the toughest part of the job of putting together a launching vehicle.

Aerojet, Rocketdyne, and Grand Central make up the California group of the rocket industry, and they probably do about 75% of the business.

One reason for the location of the biggest rocket companies in California is the extensive facilities of Cal Tech's Jet Propulsion Laboratory. The lab has been a pioneer in rocket research and is operated by Cal Tech for the military.

• **"Oldtimer"**—While the East can't boast of the biggest rocket companies, it can claim one of the oldest, Reaction Motors, Inc., Denville, N. J. This company dates back to 1941, making it Aerojet's senior by one year.

RMI is part of a larger organization known as OMAR, which is a joint undertaking by Reaction Motors, Olin-Mathieson Chemical Corp., New York, and Marquardt Aircraft Co., Van Nuys, Calif. The tie-up of these companies is entirely logical. Marquardt is a specialist in ramjet engines. These engines are not efficient until they have attained a speed of 1,500 mph. and it takes rocket power to get a plane equipped with a ramjet engine to move that fast. So RMI makes the liquid rocket engines Marquardt needs. And Olin-Mathieson makes the fuels for the rockets. Together, they produce an important power package with many applications.

• **RMI's Niche**—RMI has carved its niche in the rocket field through its work on liquid engines. It built the motors for the Viking long-distance test rocket made by Glenn L. Martin Co., and also made the rocket engines for the Bell X-1 and X-1A test aircraft that hold the altitude and speed records.

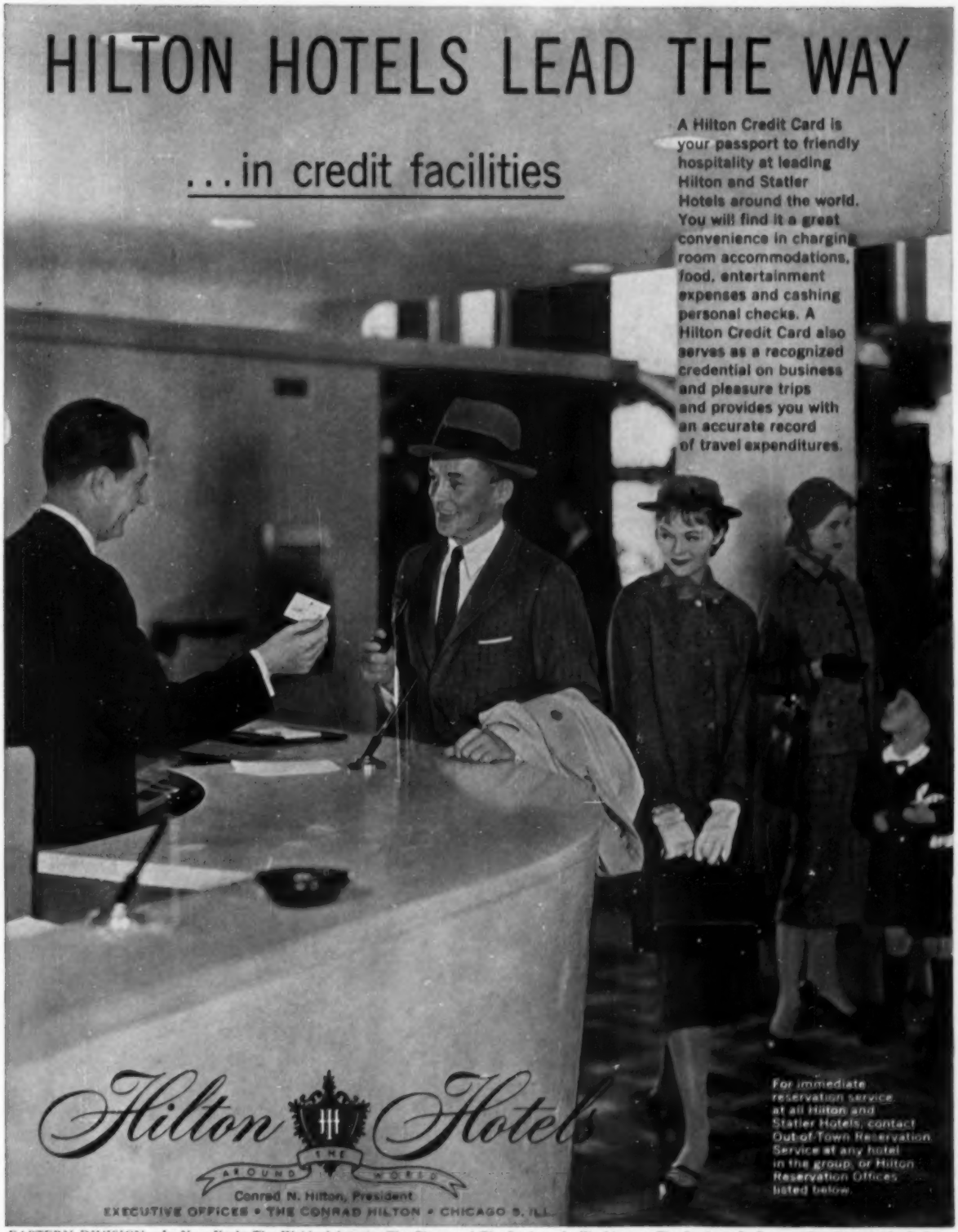
Right now the company holds about 30 separate contracts from all branches of the armed services. Its sales this year are estimated at $12-million, up from $7.5-million in 1955. And employees at its New Jersey facilities have jumped from 669 at the end of 1955 to 1,200.

Like Aerojet, RMI isn't staking everything on liquid engines. In the trade, it's said that RMI received one of the biggest contracts for high-energy solid-

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propellant research and development this summer. This could lead to a substantial production contract in a few years.

• **Fuel Maker**—Olin-Mathieson's contribution to the rocket field is in the development of propellants, both liquid and solid. Olin built the first commercial plant to make hydrazine, a derivative of ammonia and an early rocket fuel, and it is researching the whole range of possible new fuels (BW—Aug.26'56,p140).

The company does its rocket work at Niagara Falls, N. Y., and East Elkton, Md. It has had to beef up its force of rocket workers from 600 to 1,000 over the past year. Olin's expansion plans include a $36-million plant for the Air Force at Model City near Niagara Falls and a smaller plant for the Navy at Lake Ontario.

• **Solid Propellant Specialist**—Another company active in development of rocket fuels is Thiokol Chemical Corp., Trenton, N. J. Its specialty is solid propellants. Thiokol operates a research and development plant at Elkton, Md., and is building a production plant at Trementon, Utah. It also operates divisions at the Army's Redstone Arsenal at Huntsville, Ala., and the Air Force's Longhorn Ordnance Works in Marshall, Tex.

Thiokol sales will hit $17-million this year, according to Pres. J. W. Crosby, roughly double last year's. The company's best customer is Hughes Aircraft Co., which makes the Falcon air-to-air guided missile. Thiokol supplies the motor.

A third rocket fuel manufacturer, Phillips Petroleum Co., Bartlesville, Okla., has branched out into production of the rocket engine itself. Phillips operates Air Force Plant No. 66 near McGregor, Texas, and is said to have developed a high-power single rocket motor.

• **Well-Known Names**—Other big names in the rocket business are Bell Aircraft Corp., Buffalo; General Electric Co., Schenectady; and Curtiss-Wright Corp., New York.

Bell specializes in liquid-propelled rockets, does considerable research and development in addition to its production work. It is one of the two suppliers of motors for the Nike guided missile and builds the complete powerplant for the Rascal missile.

General Electric doesn't talk much about its rocket propulsion activities. But the company attracted considerable attention when it landed the subcontract for the first-stage rocket for Project Vanguard. GE has combined its rocket engine work with its aircraft gas turbine division in Cincinnati. The company found the two different engines could draw on many common engineering skills. END

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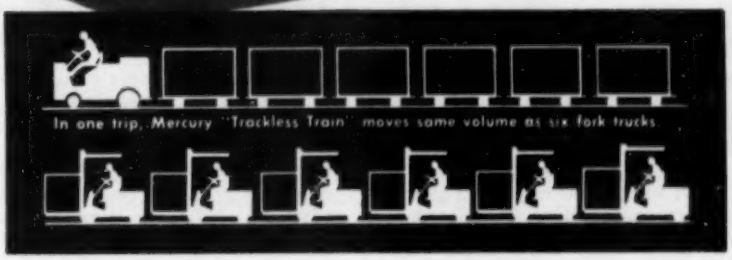
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The Baffling Dilemma of the Hypo Steel Co.

The Company

You won't find the name of the Hypo Steel Co. listed on any exchange, but there is nothing fictional about the company or about its problem. This hypothetical concern is a composite of nine of the largest steel companies and can be taken as fairly representative of the situation of the steel industry, explored in the story below. And like the rest of its industry, it faces a real problem even though it is a strong and prosperous company—as the figures at the right show.

Fast Write-Off Holds the Key

The steel industry got a disappointment last week. Defense Mobilization Director Arthur Flemming announced that he would not approve any more tax write-offs for steel, at least until the Pentagon comes up with new figures on defense mobilization needs, probably early in January (BW—Oct.6'56,p36). That means, for the time being, that steel can get no more certificates of necessity allowing the cost of new plants to be written off against taxable income in five years.

But it doesn't mean that steel is going to give up its fight to get fast amortization extended. The issue is too important to steelmen. They will shift the fight now to the Cabinet level, and they won't give up so long as there is the faintest hope of getting their point accepted.

Fast amortization is crucial in the industry's thinking these days. It's the most practical way that steel can see out of a dilemma that becomes clearer and more painful every day.

I. Prices, Profits, Paradoxes

For the past two and a half years, the top executives of the steel industry have been making a series of pronouncements that sound very much like double talk:

• With company after company announcing expansion programs, spokesmen for the industry have insisted that new capacity costs so much that it can't be expected to pay its way.

• With earnings hitting record or near-record levels each quarter, the same spokesmen have declared that profits are too low for them either to cover expansion costs themselves or to attract new capital into the steel industry.

• With depreciation charges already eating up about 25% of its income from operations, the industry solemnly declares that there is only one practical way out of its troubles: Renew its privilege of depreciating all or most of its new plant in five years instead of the standard 25.

Obviously, the more you charge off to depreciation, the more you cut into current earnings. And by the same token, the faster you write off a new plant, the wider your operating profit on that plant has to be if there is to be anything left to carry through to profit.

Hence, the steel industry's prescription for its ills sounds like a concentrated dose of the hair of the dog that bit it.

• **Logical Support**—Actually, there is hard logic behind steel's argument. For the fact is that a big, complicated industry operating in a big, complicated economy sometimes finds that the hair of the dog is the remedy.

All of the steel industry's thinking starts from one simple proposition: Steel must expand. It is a basic industry, in fact, the nearest thing to the basic industry of the U. S. economy. In four of the past five years, steel output has fallen short of demand, and if projections of the future mean anything at all, demand is going to keep on rising. If steel fails to keep pace with this rise, the pressures upon it will become intolerable. Either the government will step in, or the big users will set up their own steel-making departments, or both.

In a simple economy—one of those tidy little kingdoms of reason that you find in the opening chapters of economics texts— steel's course would be perfectly plain to everyone. It would simply raise prices on everything it sold. Higher prices would increase the industry's income; part of this additional net could be used to finance expansion, and part could be used to sweeten up the shareholder's dividend. The higher yield on the stock would make it easy to attract new capital to pay for more expansion. And meanwhile, of course, the higher prices would discourage some of the demand so that a smaller total of expansion would be indicated. At some point, everything would slip into balance, and the problem would no longer exist.

• **Complications**—But the world in which steel lives is anything but tidy. It is complicated by such factors as these:

• The 52% federal tax on net income of corporations.

• The postwar inflation, which has hiked the cost of new steel-making capacity to something like four times its prewar level.

• The tradition of "administered prices" in the steel industry. Steel isn't sold like fruits and vegetables on a basis of what the market will bear. Prices change infrequently, and nowadays the controlling consideration in the minds of the steel companies when they set prices is costs rather than the state of the market. A producer who raises his prices doesn't feel that he can fend off criticism by arguing that market conditions are responsible. If he is to avoid the charge of profiteering, he must show a cost increase.

• . . . **And Dilemma**—This is where steel's problem begins to get sticky. For the present relation between the prices

Financial Position at End of 1955

	Millions of Dollars	
Working capital		$337.7
Investments and long-term receivables		36.1
Plants and equipment:		
Gross cost	$1,129.0	
Depreciation reserve	637.5	
Net		491.5
All other assets		5.8
Total assets		871.1
Less:		
Long-term debt		124.2
Reserves		29.6
Shareholders' investment		717.3
Represented by:		
Preferred stock (576,420 shs.)	57.6	
Common stock (12,626,000 shs.)	201.5	
Income retained in the business	458.2	
Ingot capacity — 11,097,000 N.T.		

Operating Results for 1955

	Millions of Dollars
Sales and operating revenues	$1,211.1
Income from operations	275.4
Less:	
Amortization, depreciation, and depletion	69.6
Interest charges	3.8
Federal income taxes	100.8
Net income	101.2
Less Dividends	
Preferred	3.9
Common	36.7
Retained in the business	60.6
Cash throw-off:	
Net income	101.2
Amortization, depreciation, and depletion	69.6
Total cash throw-off	170.8
Net income per share of common	$ 7.70
Market value per share	75.21
Dividends per share—common	2.91
Yield	3.9%
Price times earnings	9.8

The Problem

Hypo Steel needs more capacity, another integrated plant. Its engineers say the economical way to get it is to put in a big integrated plant, a 2-million-ton-a-year job. Here are the figures on what's needed:

	Millions of Dollars
Cost of plant and equipment at $250 an ingot ton	$500
Working capital—estimated at $25 an ingot ton	50
Total investment required	$550
Estimated annual sales	
Product from 2-million ingot tons at 70% yield =	1.4-million tons
Selling price	$144.50 a ton
Sales—1.4-million tons at $144.50 =	$202.3-million
Estimated income from operations	45.6-million

So far, so good. The difficulty is in what the new plant and the debt incurred to build it do to Hypo's operating figures. And that depends on how Hypo depreciates its new plant. It has three choices. It can (1) amortize conventionally over 25 years, or (2) amortize on the declining balance method permitted by the new tax law, or (3) get a certificate of necessity from the government and amortize in five years.

The table (right) shows what Hypo's books will look like over the next five years if it takes any one of the three courses.

The article beginning on the opposite page explores the dilemmas this raises for Hypo and its fellow steel producers.

Results of Hypo Steel Co.'s New Mill—Amortized Three Different Ways

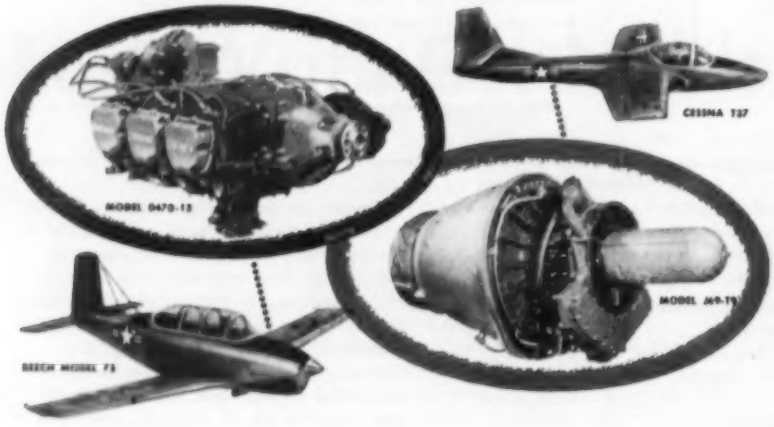
	1. With 25-year amortization	2. With declining balance amortization	3. With 5-year amortization
	Millions of Dollars		
Income from operations	$45.6	$45.6	$45.6
Less			
Amortization (5-year average)	20.0	34.1	82.5
Interest at 3½% (average)	17.8	17.3	16.0
Income tax	4.1	—	—
Net income	3.7	— 5.8	—53.2
These losses can be offset against Hypo's other earnings. So . . .			
Cash throwoff			
Net income	3.7	—	—
Amortization	20.0	34.1	82.5
Tax saving	—	3.0	27.7
Less net loss	—	— 5.8	—53.2
Total throwoff per year	23.7	31.3	57.0
If the entire cash throwoff is used to reduce debt Hypo will have . . .			
Debt at end of five years	421.5	393.5	265.0

that the industry gets for its products and the costs that it must incur for new capacity is such that expansion doesn't make sense profitwise. The new plant wouldn't actually lose money. But it wouldn't make much either. Certainly not enough to justify tying up capital for 25 years or so.

And yet, if he raises prices to the point where the new capacity will yield a profit, the steel producer is wide open to the charge of profiteering on his business as a whole. Most of his output is coming from his old facilities—the ones that he built at lower costs. His profits on this will be more than

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". . . but U.S. Steel had the money, and it wanted to build for the long pull . . ."

STEEL starts on p. 86

he can justify to his customers and to the government. Moreover, because the government is taking a 52% bite out of his net, he will have to raise his prices $2 to gain $1 net. From his customers' standpoint that is simply making them the goat. They will use all the strength they have—economical and political—to see that steel doesn't solve its problems by the price-raising route.

• **Postponements**—Ever since the end of World War II, the steel industry has chewed glumly on these facts, but at first the problem didn't present itself clearly. In the first wave of expansion after the war, most companies were able to add ingot capacity by adding or improving equipment to increase the output of existing facilities. The costs for this extra tonnage were relatively low—since part of it came from better utilization of existing facilities.

The only mill built from the ground up during this period was U.S. Steel's Fairless works, a 2.2-million-ton proposition that cost more than $600-million. From the standpoint of pure economics, this was a questionable proposition, but Big Steel could raise the money, and it wanted to build for the long pull, putting in capacity that it could gradually enlarge over the next decade by rounding out.

The coming of the Korean War again postponed the industry's problem; the government revived the wartime device of accelerated amortization. It set up expansion goals for the various basic industries—including steel—and offered to let the producers charge off the cost of new facilities against taxable income in five years instead of the customary 20 or 25.

Accelerated amortization on all or part of a new plant has some peculiar drawbacks, but it also has some enormous advantages.

• **The Dark Side . . .**—The main drawbacks are two:

• It reduces current income because it involves heavier deductions for amortization.

• It leaves you open to heavy taxes at the end of the five-year period because you then have little depreciation left to deduct from taxable income.

• **. . . And the Bright**—The advantages, especially from the standpoint of an industry like steel, are heavy enough to outweigh the drawbacks:

• The cash throwoff—the amount of money that a company can keep out of its current earnings—is enormously increased. Although depreciation counts



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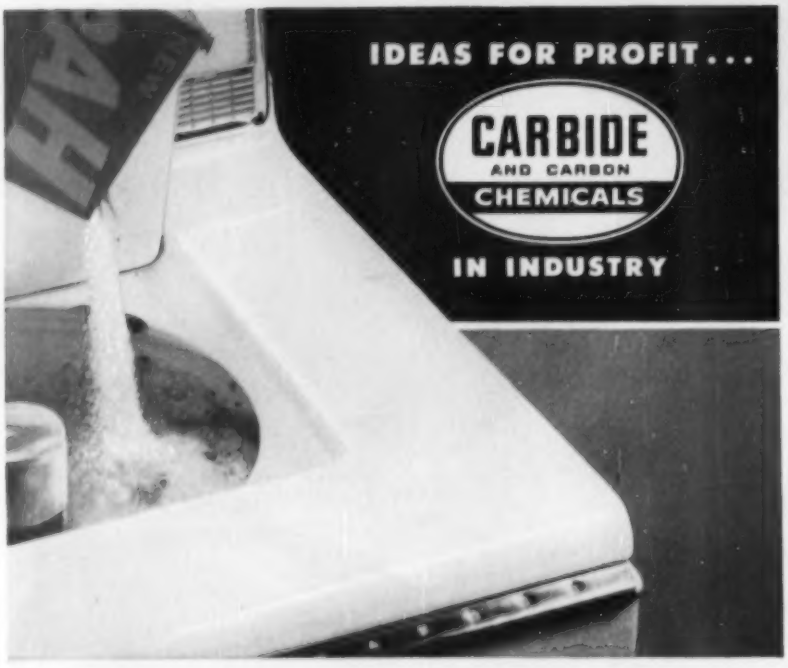
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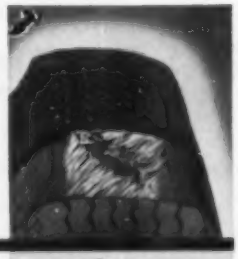


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". . . the lion's share—52% —of the additional charge against income would have gone into taxes . . ."

STEEL starts on p. 86

as an expense on the books, you don't have to pay out money to cover it. You get to keep the money, and you can use it either to finance more expansion or to pay back money you borrowed to build the new plant.

• A modest hike in prices will not look like profiteering because the heavy amortization charges will hold income down.

• The lion's share—52%—of the additional charge against income would have gone into taxes. Theoretically at least, this will be offset eventually by the extra taxes the company has to pay when it has used up its deduction. But even in that case, the builder of a new plant gets what amounts to a five-year loan without interest from the taxpayers. And where raising cash is the big problem, that loan can make all the difference.

II. A Case in Point

You can see just how much difference if you take a look at the example in the box on page 86. In this example, BUSINESS WEEK has created a hypothetical company by averaging the published figures of nine of the largest steel companies.

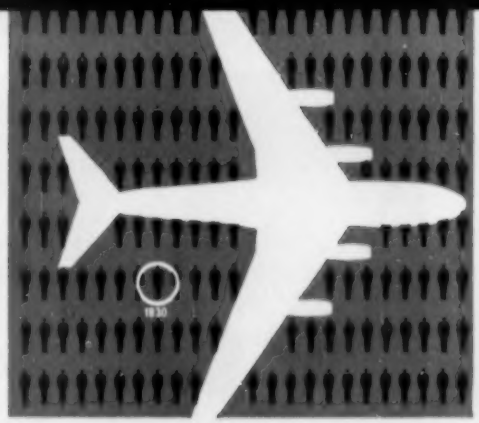
This hypothetical company—call it Hypo Steel Co.—is planning an expansion, like most of the other steel companies in the U. S. To get a fully integrated operation, it has to think in terms of adding about 2-million ingot tons. That's a big hike for a company of Hypo's size and in some respects the figures in the example exaggerate the problem. But they do make steel's dilemma clear.

• **Cost Estimates**—The first thing that Hypo does is to get estimates on the costs of expansion. The figures when they come in are enough to make everybody's hair stand on end. Even though Hypo is not planning any raw material facilities, its new capacity—a fully integrated mill in a new location—will cost something like $250 a ton, or $500-million for a 2-million-ton package. Add to that 10% for additional working capital requirements and you get a price tag of about $550-million.

The next question is how much the plant will contribute to income. Here, again, the figures make dismal reading. With 2-million tons of ingot capacity, you can expect to get about 1.4-million tons of finished steel to sell your customers. At an average price of $144.-

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"... much of that plowback has to go for modernization or replacement of existing facilities . . ."

STEEL starts on p. 86

50, that will give you a gross of $202.3-million.

How much of this will be operating profit? Here you have to do some guessing. Presumably, Hypo's new plant will be more efficient than its old facilities and the company should be able to carry a higher percentage of its earnings through to net. But the over-all profit showing of the company includes profits on activities other than just making steel—shipping, mining, cement plants, and the like. All in all, steel industry experts insist that Hypo can't expect the new plant to show a better profit ratio than the present over-all rate for all its operations—22.5%. On that basis, the 2-million tons of ingot capacity will add $45.6-million to income before depreciation, fixed charges, and taxes.

• **Finding the Funds**—Next question: Where is the money coming from? Some might come from retained earnings; Hypo is currently plowing about $60-million a year back into the business. But that's obviously not enough to build a $550-million plant, and besides, much of that plowback has to go for modernization or replacement of existing facilities—facilities that were built for about $100 a ton and must be replaced at current prices.

Can it come from a common stock issue? Some fast figuring convinces the Hypo management that it can't. The company now has 12.6-million shares of common outstanding; the current market price is $75.21, and last year's earnings figure out to $7.70 a share. At $75 a share, Hypo would have to sell over 7.3-million new shares to raise $550-million.

If it put out an issue of that size at that price, the new stockholders would own 37% of the company, but their capital would have added only 15% of the tonnage. And to preserve the earning power of the old stock, the new capacity would have to earn $118-million before taxes. No dice on stock financing.

• **Where to Borrow**—So Hypo decides to borrow the money. But now the question is: Can it?

Whether it can or not depends pretty much on how fast it can plan to pay back. And this is where accelerated amortization comes in.

In charging off the cost of the new plant, Hypo can plan on one of three assumptions—accelerated amortization under a certificate of necessity, declining balance at double the normal rates



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". . . the only present basis on which the new capacity would look like a good bet to a prudent lender . . ."

STEEL starts on p. 86

(as permitted by present tax law), or straight line over 25 years. The differences show up in the example on page 87.

Even if the government decides to reopen the expansion goals and grant a certificate of necessity, it won't give Hypo five-year amortization on the entire value of the plant. If past policy is a guide, the best Hypo can expect is a certificate covering 75% of the cost of the facilities—$375-million. But that will make a tremendous difference. The company will be able to charge off $75-million a year under the certificate and another $7.5-million (average for the first five years) by applying declining balance depreciation to the $125-million of cost not covered by the certificate.

Plainly, accelerated amortization would knock current income down. In fact, the new plant would show a thumping loss for the first five years of its life. But there would be two things to sweeten management's view of this.

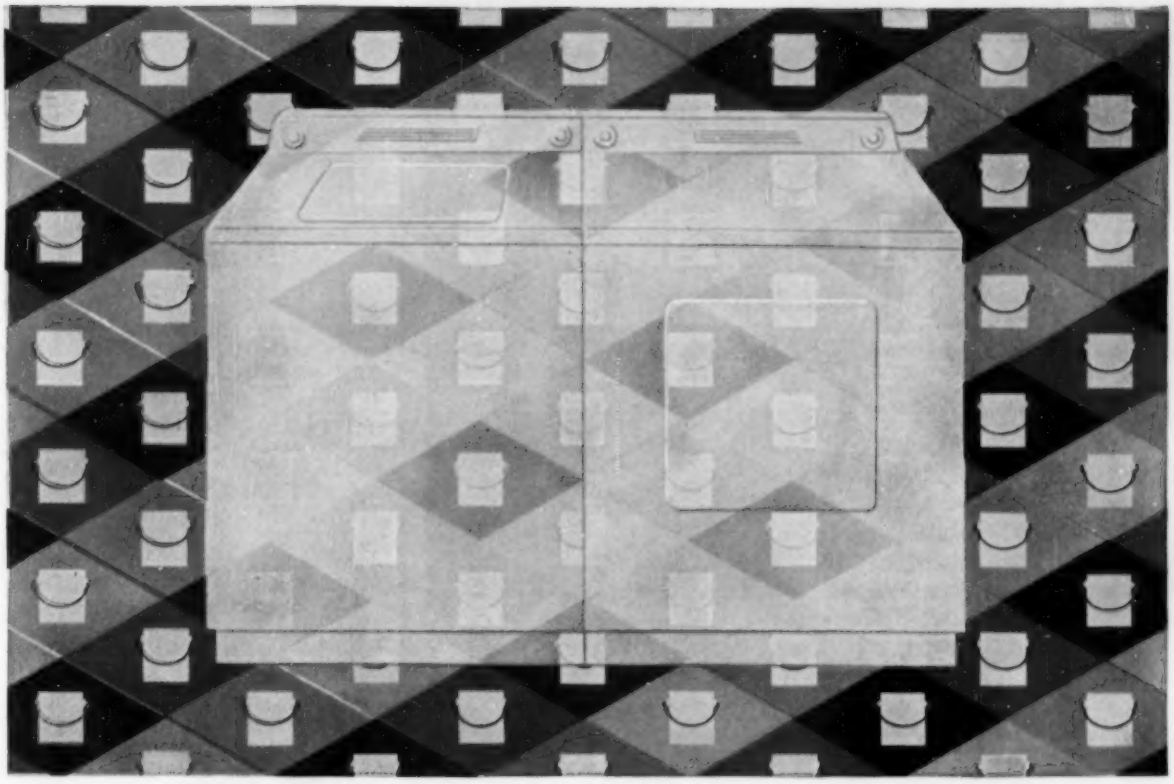
- A tax saving would offset 52% of the loss, because the loss would be deductible from the company's other income.
- With the plant running at capacity, the cash flow into the company treasury would be enormous. In five years, the company could cut its debt in half.

Accelerated amortization, in fact, is the only present basis on which the new capacity would look like a good bet to a prudent lender. Either declining balance or straight line would tie up the money for too long.

III. Too Much Pressure

All this isn't to say that the steel industry won't expand if it doesn't get its way on accelerated amortization. The pressure on it is too intense to be ignored. And in some ways, the picture that faces the industry isn't so somber as the one that shows in Hypo's figures.

For one thing, the price tag of $250 a ton represents a new mill in a new location. Some companies may be able to shave that, either by building at existing locations or by using new technological tricks to hold down the size of the investment. Some analysts say that an average figure of $175 a ton is more likely than $250 for the expansion of the next few years. And, they point out, anybody who does build a completely new mill in a new



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". . . the steel companies face a period in which their depreciation charges will take a drastic drop . . ."

STEEL starts on p. 86

location will be smart enough to put it in a spot where he can serve a lusty regional market at a saving of $5 to $10 a ton on freight costs.

For another thing, steel, if it has to, will push up its prices and hold down its dividends until it can swing the new plant that it feels it must build. That would mean taking the costs out of the hides of customers and stockholders, but needs must if the devil drives. And the devil in this case is the thought that if the steel industry doesn't expand someone else will.

• **Tax Relief**—Nevertheless, the figures on Hypo Steel do explain why the industry as a whole has been hammering so hard for some sort of tax relief ever since the emergency goals were closed a year ago. And aside from the figures, there are two other considerations:

• To push prices up to the point where new plant was clearly profitable in its own right would be inviting new companies to move into the field. But financing through a certificate of necessity isn't attractive to a brand-new company; to take advantage of fast amortization you need the tax saving that you get by applying the deduction against other income.

• Accelerated amortization on the Korean round of expansion is beginning to run out. The steel companies face a period in which their depreciation charges will take a drastic drop. This will help improve net income, but it will present the companies with an enormous tax bill and also show a profit position making it hard to justify price increases. They would like to put some of that tax money to work building the new plant they need.

• **Projections**—Last year, U. S. Steel charged $147.5-million for accelerated amortization. Had it charged regular depreciation—$30-million—instead, its cash flow would have been $80-million less. Federal income taxes would have taken $59-million and common dividends $20.7-million of the $118-million difference in the two accruals.

Since U. S. Steel represents 31% of the industry, you can project that, roughly, into a $258-million shrinkage in the industry's cash flow had fast write-offs not been available.

With the emergency expansion goals closed, there isn't a steelmaker who doesn't face exactly that problem in 1959. Some face it next year.

The dimensions of steel's construction job are what make the cash prob-



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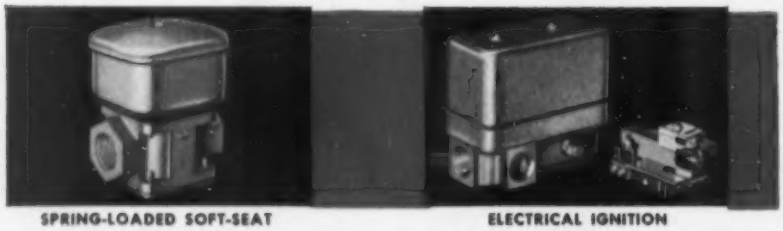
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46 YEARS IN THE MANUFACTURE OF PRECISION PRODUCTS

". . . there's considerable doubt whether the money could be raised at all without fast depreciation . . ."

STEEL starts on p. 86

lem so formidable. There are two parts to it:

Replacement. This will run at a rate of 3.3% to 4% per year. Next year, that'll mean from 4.3-million to 5.2-million tons of capacity must be installed just to stay even—which is to say, to keep the shortage from growing. These tonnages, of course, will rise steadily every year.

Expansion. Now, it's proceeding at a rate of 5-million tons per year through 1958.

The dimensions of steel's financing job—if it is to achieve all this construction—are even more impressive. That job, also, has two parts:

Rounding out—raising the capacity of existing plants—is the less expensive method. It has yielded all but 2.2-million tons of the 36.4-million ingot tons installed postwar. Over the next decade, rounding out will cost more and there will be lots less of it to be done simply because so much of what can be accomplished already has been accomplished.

Wholly new plants—"grass roots" plants, the industry calls them—are the monsters that have steelmakers worried sick, and with considerable reason, because at $250 to $300 per ton and up, they cost so much there's considerable doubt whether the money for them can be raised at all without fast depreciation.

What all this totals up to over the next five years—in tons and current dollars—for replacement and expansion—is something like this.

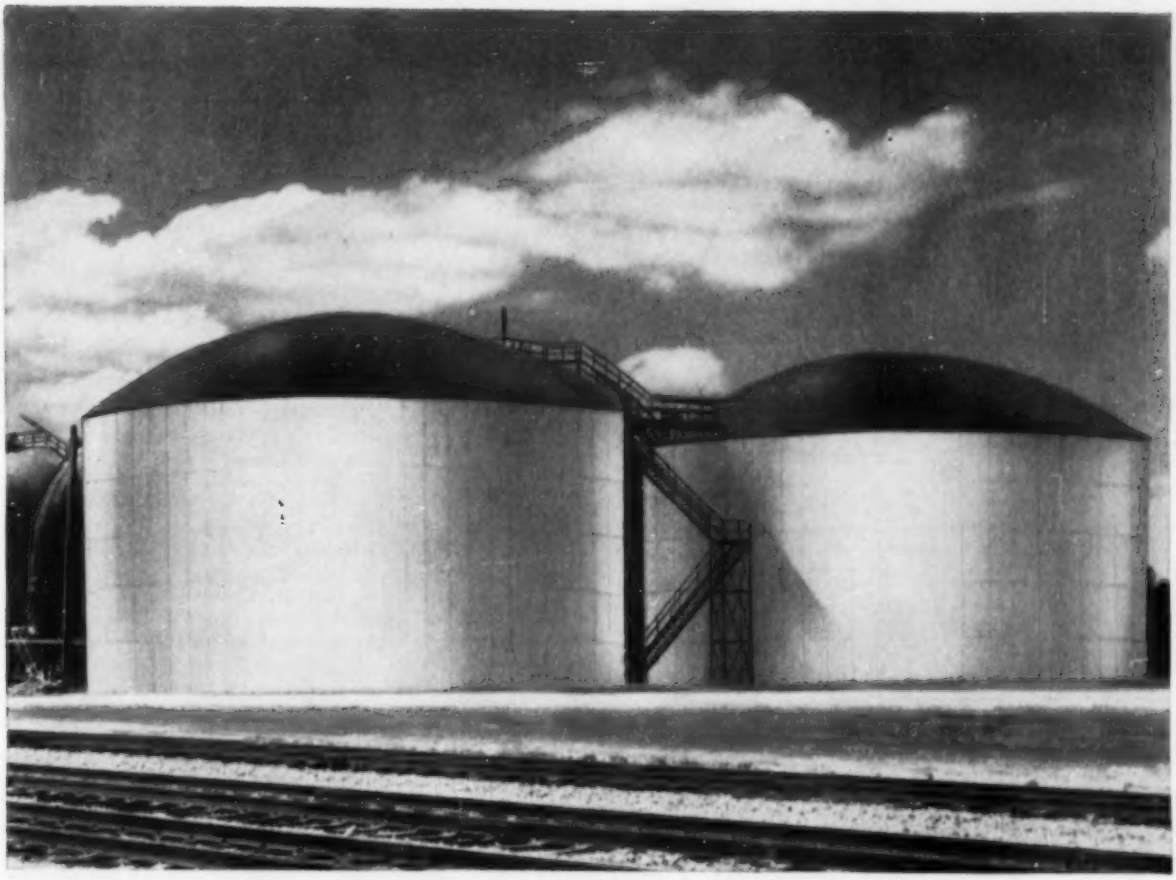
- Steel will spend about $5.6-billion to replace about 28-million existing tons of capacity.
- It will spend another $4.6-billion to install about 20-million tons of new capacity, of which perhaps 6.6-million tons would be wholly new.

That would leave steel capacity at 151-million ingot tons Jan. 1, 1962.

To finance the start of the job, steel already wants approval for at least $1.4-billion worth of accelerated amortization. And it won't give up easily.

IV. Escaping the Trap

Sizing up their problems, most steelmen see accelerated amortization as the only practical way out. But some of the industry's leaders aren't happy with the idea. They regard fast write-offs as a temporary measure, justified only in emergencies. What they want



35,000 barrels of 83% ammonium nitrate solutions are stored without corrosion in these aluminum tanks. Development was a joint effort between **Sohio Chemical Co., Chicago Bridge & Iron Co.,** and **Aluminum Company of America.** Alcoa Aluminum Alloy 5052 is used for sidewalls in thicknesses up to 1⅞". The consumable electrode process was used for all welding.

SOHIO insures stable storage of 83% ammonium nitrate with two 35,000 barrel tanks of ALCOA ALUMINUM

Aluminum will not render ammonium nitrate unstable! That's why Sohio Chemical Company chose Alcoa® Aluminum for two special 35,000 barrel tanks used to store 83% ammonium nitrate solutions produced in a new $17-million petrochemical plant at Lima, Ohio. Now in full-scale production, the plant yields over 300,000 tons of ammonia and derivatives yearly.

Like so many other petrochemical producers, Sohio has found that Alcoa Aluminum provides an ideal answer to the problem of better, cheaper storage and handling of ammonium nitrate and nitrogen solutions. And the superior corrosion resistance of aluminum gives it extra-long service life under constant exposure to chemicals and plant atmospheres normally corrosive to most metals. That makes Alcoa Aluminum the least expensive material to solve storage and handling problems when product protection and corrosion resistance are vital.

The superior storage and handling performance of Alcoa Aluminum has been proved on-the-job in such diverse applications as these: fertilizer solution storage tanks, nitrogen chilling exchangers, prilling towers, tank cars, piping and drums. A new Alcoa book, *Process Industries Applications of Alcoa Aluminum,* contains 80 pages packed with performance and design data. To get your *free copy*, write to Aluminum Company of America, 881-K Alcoa Building, Pittsburgh 19, Pa.

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". . . investment in steel is more vulnerable to inflation than other types of investment . . ."

STEEL starts on p. 86

as a long-term solution is a basic revision of the tax laws.

Steel's fundamental trouble is that it has to invest enormous amounts of capital in facilities that last a relatively long time—25 years or more. If there is a period of inflation between the time of investment and the time of replacement—as there was from 1940 to 1953—depreciation charges on the old plant won't add up to enough to buy a new one. In other words, money invested in the steel plant doesn't have the same purchasing power when it is recovered that it had when it was invested.

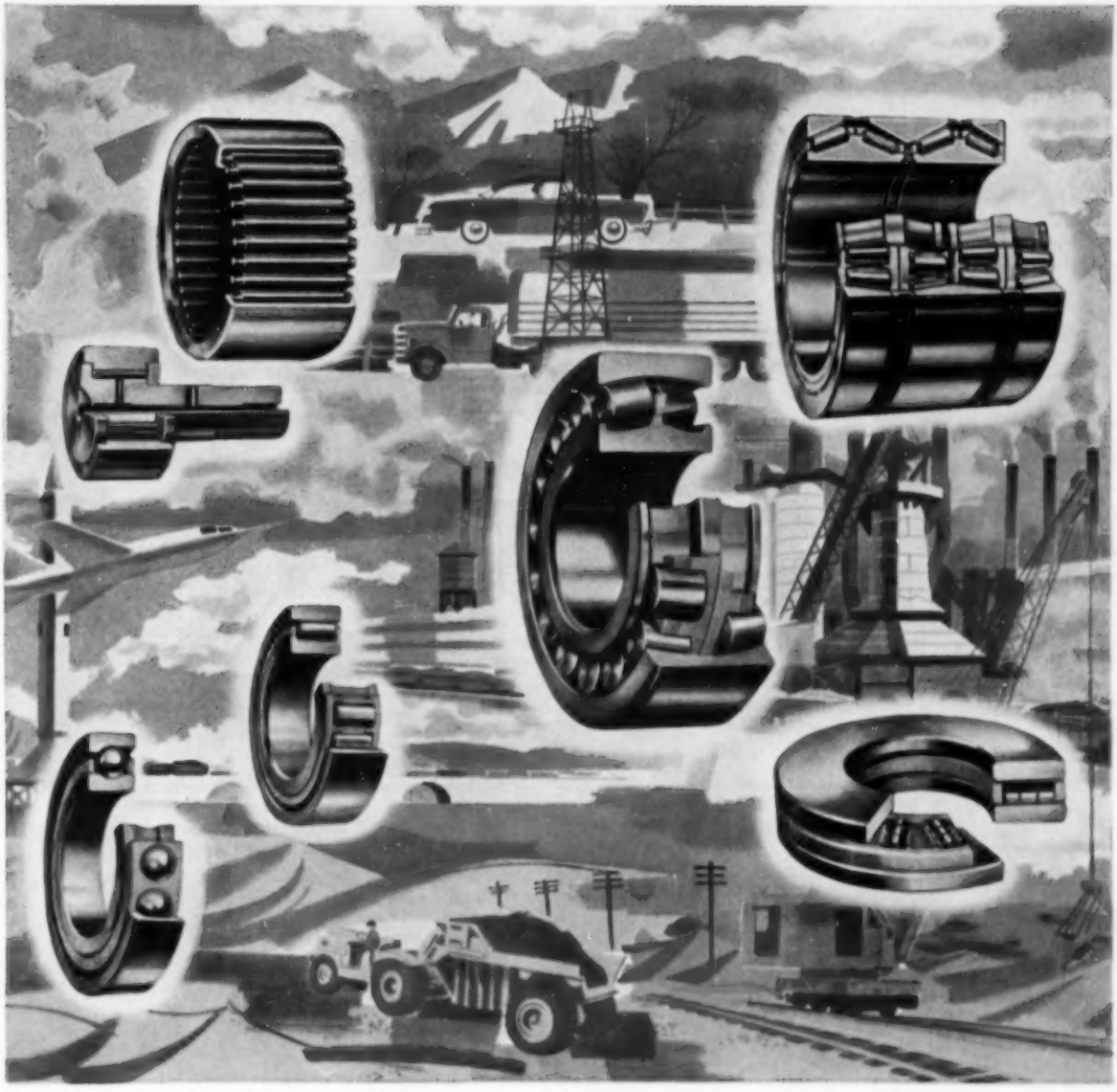
• **Tied to Costs**—This is where the steel industry finds itself trapped between corporate tax system on one side and its tradition of administered prices on the other. If it could run prices up as high as the market would bear, it could recover enough in additional profits to replace old plant and build new capacity. But as long as its prices are tied to costs—and costs are based on a depreciation charge that reflects original cost rather than replacement cost—the industry is stuck with a price list that won't yield that kind of profits.

U.S. Steel Corp. has long been plumping for higher depreciation charges to reflect replacement costs. At one time it even defied its accountants and made a deduction for more depreciation than the tax laws would allow. But this was makeshift.

What Big Steel and many others really want is an overhaul of the tax laws that would let them write off all plant in a shorter time—not necessarily five years but something a good deal shorter than the 25 years the law now prescribes. The revision of the 1954 tax law permitting declining balance depreciation at twice normal rates was a step in that direction, but not enough of a step to satisfy the steelmen.

• **A Longer Limb**—As the industry sees it, an investment in steel is more vulnerable to inflation than other types of investment because it is bigger and it lasts longer. What they would like is freedom to write it off faster, pushing more of it into costs in any given year, and thus justifying a higher price list to protect them against inflation.

But all this is for sometime in the future. What the industry leaders see immediately ahead is the need for another big round of expansion. And emergency writeoffs are the only way they can see to handle it. **END**



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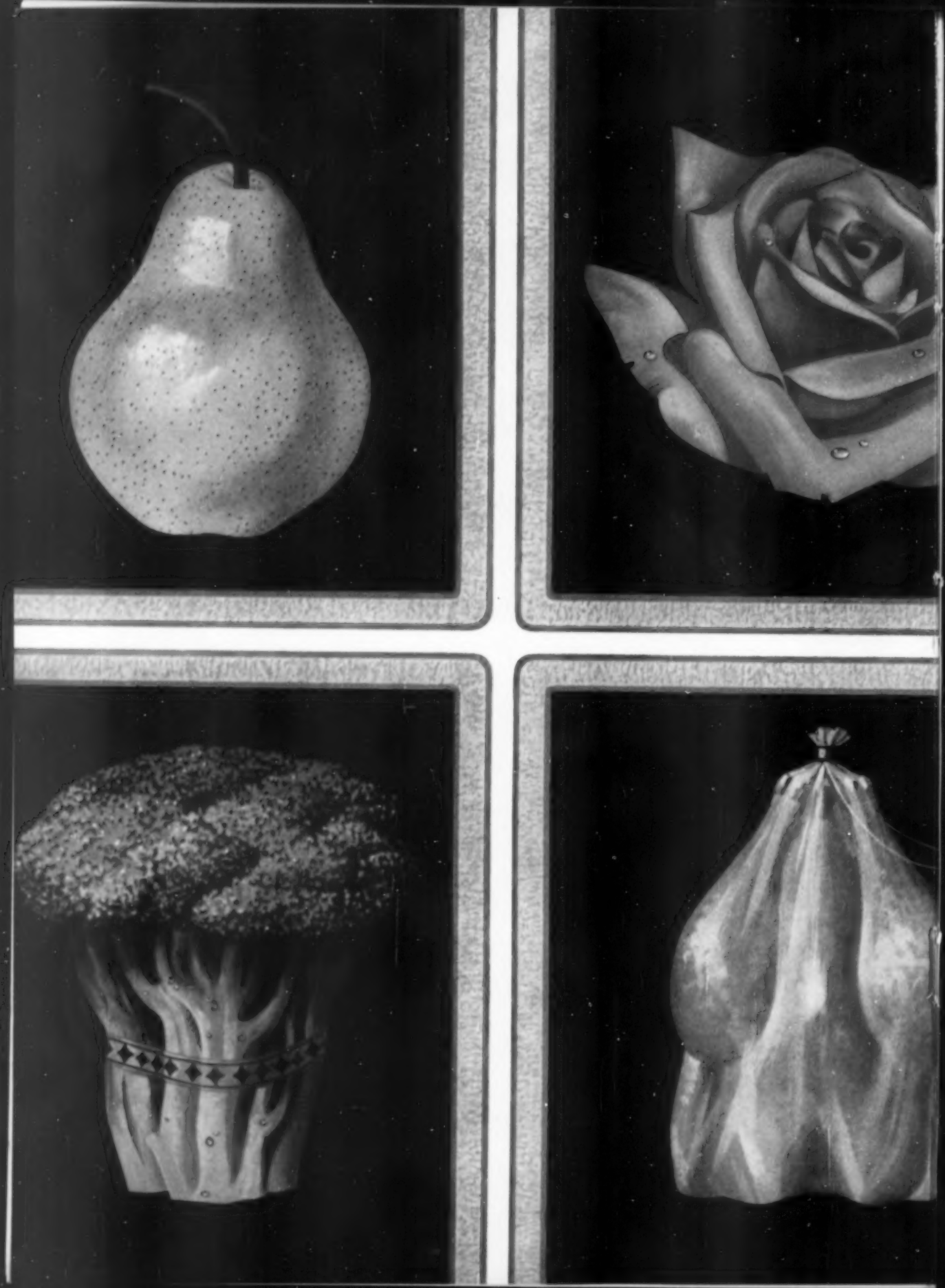
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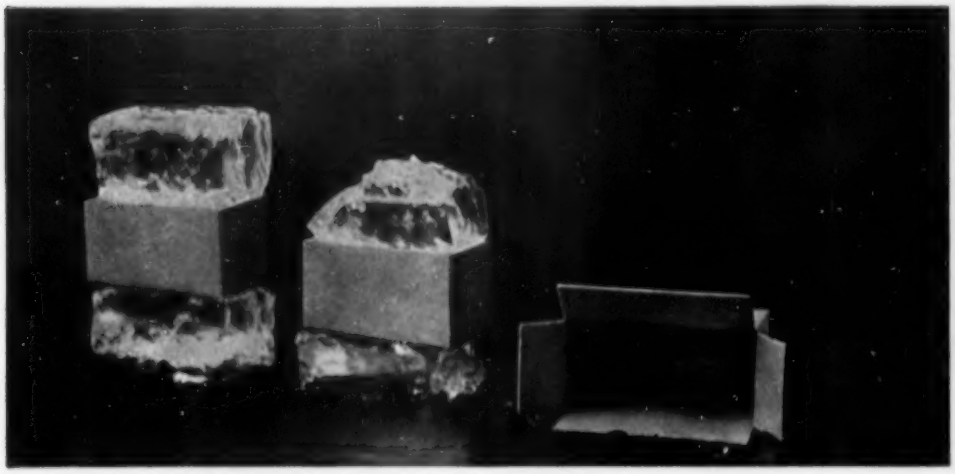
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Recruits' High Pay Upsets Oldtimers

New Dilemma for the Boss

The executive holding these scales is in a delicate dilemma. If he chooses to hire the two bright young men—at today's high starting pay—he may make his older hands most unhappy. The squeezing of pay differentials can make his shop a hotbed of discontent, with an uncomfortably high turnover. If he doesn't hire them, and accepts the lesser talent that he can get at his old starting scale, he may end up with a comparatively quiescent company staffed with mediocrities. But sooner or later he has to make his choice.

His troubles arise, obviously, from the current shortage of manpower—and womanpower—at all levels. For the past two years, at least, starting salaries have been going up faster than the whole general range of salaries. In many cases, new employees, whether rank beginners or job hoppers, are asking—and getting—salaries as high as, or higher than, employees who've already had experience with the company.

• **Supply vs. Demand**—It's not that these newcomers are smarter, better trained, or more experienced than older (in terms of service) employees. It's just that there are fewer of them—at a time when growth in all fields is forcing an unparalleled demand for new people.

The problem doesn't arise at the production-worker level where wages are fixed for the job by bargaining contract, nor at the top levels where no two men have identical responsibilities. It's in the big middle ground, where jobs are comparable but salaries are flexible, that personnel men are having their worst headache.

• **Case for Friction**—Here's one not-so-hypothetical case: A company that uses about 20 office girls in its central set-up, was, four years ago, paying $50 as top salary, $40 as starting salary, and was giving the office manager $75 a week. In the intervening years, the top rate has reached $65, starting salaries are close behind, and the office manager has moved up to $85. But recently, in hiring replacements, the company has had to pay some new employees $75, and everyone else is angry.

Older employees doing the same work feel they should be getting substantially more than the new girls, since they already have experience and seniority in the work. The supervisor not only wants more money but feels her prestige and authority are diminished because the salary differential has become so slight.

The boss is on the hook. If he ignores the situation, efficiency drops, more people quit—and he has to replace those who quit with higher-paid new employees, then face the headache of training them. But if he makes the

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general adjustments, or improves the prestige ratio to keep his old-timers happy, his direct labor costs for the department immediately jump 25%—and his budget can't take that load.

I. Ways of Expediency

The situation is not confined to clerical help—it cuts across the board. Lower and middle management are involved as well as clerical help. To a degree it's behind the frantic job-hopping of engineers who frequently find the easiest way of increasing take-home pay is to move to another company. Most other salaried workers have less mobility, but that doesn't ease management's dilemma. With the dollar difference between levels narrowing rapidly, the problem of adjusting salaries of older employees to compensate for higher starting rates is becoming acute.

• **Problem All Over**—Last week, BUSINESS WEEK reporters interviewed companies ranging from small local laundries to multi-plant giants, found all have the problem to some degree. They found that population trends indicate that the problem is going to get a whole lot worse before it gets better. They also found that many companies are unwilling to discuss the problem, and that there's even less agreement on how to solve it.

In many cases, the reaction was "Don't look, and maybe it'll go away." But the working policies—generally expedients seized upon by management when the problem becomes acute—break down into these categories:

• Hire new employees at whatever you have to pay. If old employees don't like it, let 'em leave.

• Set a rigid range for the job—and if you can't find someone good who'll accept that range, hire somebody not so good who will.

• Give no general increases, but pay "merit" raises to people you particularly want to keep. Distract the rest with more "love and kindness."

• Tell new employees to keep their higher salaries a secret.

• Raise everybody's pay to compensate for higher starting rates.

The last way out—which most companies agree would be ideal, but impractical—is followed by a bare handful of managements. In most cases here, the general raise is made on a dollar-for-dollar basis. If the starting rate increases $5, everybody up the line gets a $5 raise, but the percentage between jobs—the prestige ratio—decreases. A very few companies have tried to give a general raise on a proportional basis. If the starting rate goes up 10%, everybody's pay goes up 10%. But when this happens, it usually applies only to the bottom two or three levels. And one company that follows that

system is worried that it's just moving its problem to a different and more delicate level: that it's moving supervisors up so fast they're bumping at the rates of their superiors, creating resentment there.

II. Old Staff Loses

Much more typical is what's happening at the University of California, almost the only organization willing to talk for the record on the subject. The university, a public body limited by special political and fiscal problems, nevertheless, has a basic personnel problem comparable to that of private industry.

"Minimums have gone up faster than the whole range of salaries," says Boynton Kaiser, its chief personnel officer. "We haven't treated old employees as generously as new ones, and morale of the older employee is lower. Our policy is not to raise salaries generally. If an older employee complains that a newcomer is getting the same wage, we have to tell them that, much as we regret it, that is the current policy.

"Then we either lose the older employee, or we don't. It's resulting in high turnover at all campuses. And it's the good people that are leaving."

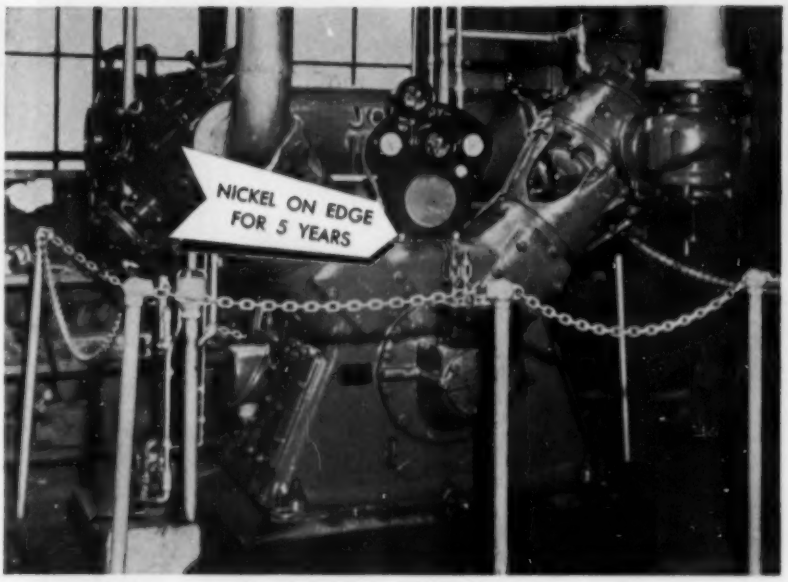
• **Five-Year Spread**—A Harvard Graduate Business School survey points up another facet. In 1951, its graduates averaged starting salaries of a little over $4,000 a year, reached $6,000 after three years. This year's crop is starting at slightly over $6,000. True, those 1951 graduates today are earning an average of $8,000—in effect doubling their salary in five years. But an observer of the group notes: "The older ones figure they're worth twice the newcomers—so they should be getting $12,000. Complicating it further is that the 1951 group is already crowding, on a pure salary basis, its own superiors—who, in turn, started earlier at less and have had to fight longer and harder to get not much further ahead."

III. Dumping Seniority

A large number of personnel men feel that employees have no right to resent the narrowing ratios. They say, in essence, that the only ones who objected were the disgruntled or inefficient ones. "A good man just puts out more to deserve a raise," says a drug company official. "The others are welcome to leave."

Easily the largest group of companies BUSINESS WEEK spoke to uses the "merit" expedient when the situation becomes acute—but almost all agree that merit increases are on an "individual" basis—"We give them to people we particularly want to keep."

• **"Merit" Only**—Several companies



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are switching their entire pay system from one of periodic increases to a pure merit system. "Eliminate the seniority idea in relation to value," says one official, "and you eliminate a lot of today's problems about differentials. No employee is necessarily worth more just because he's been there longer."

Some personnel men argue that this system will just intensify the tensions, since worthwhile employees who won't or can't fight too hard for themselves tend to be overlooked. One multiplant company, which concedes a wide range of current inequities, says right now it has no choice but to follow a rigid policy of merit raises "regardless of extraneous conditions like higher starting rates."

• **No Solution**—The whole system of pure merit raises is being questioned, however, sometimes by companies that use it themselves. A West Coast executive says: "We haven't given a gen-



"After a 1½-year survey, we decided to establish our western headquarters in MOA"

An interview with B. B. Klopfer, Vice President, Pacific Division
THE STANDARD REGISTER COMPANY

Q. Mr. Klopfer, what was the principal reason Standard Register chose the Metropolitan Oakland Area—Alameda County—as the center of its western operations?

Mr. Klopfer: First and foremost, it was a matter of proximity. We are one of the world's largest producers of continuous, marginally punched forms. Some of our best customers had already built branch plants in the West—so we wanted to be where we could give them on-the-spot service. We found we could provide the fastest service by locating in Alameda County, transportation hub of the 11 western states.

Q. Did you have any other reasons for your choice of Alameda County?

Mr. Klopfer: Many others. We spent 1½ years on a preliminary survey of western plant sites and learned that Alameda County rated particularly high in regard to labor. The great majority of the people out here own their own homes. It is recognized that the home-owning employee is the best employee.



Q. Wasn't the electronic side of your business another factor in your decision?



Mr. Klopfer: Most decidedly. Our Engineering Division maintains close contact with the electronics industry, which is centered in the Bay Area.

Q. How about the raw materials that Standard Register needs? Are they readily available?

Mr. Klopfer: We get fast delivery on the paper we require from the nearby Northwest . . . immediate delivery on packaging, inks, printing supplies and all other materials.

Q. Now we come to the weather.

Mr. Klopfer: Ideal. Not only for living and working, but for the actual manufacture of our products. Extreme variations in humidity and temperature make it very difficult to control the precision cutting and printing of mile-long rolls of paper. Alameda County's easy-going climate eliminates this problem.

Q. What has the sales picture been since the establishment of your western headquarters?

Mr. Klopfer: It is still too soon to release any definite figures. But I can say this much. Overall company production is up 15% over last year. Out here it's up 30%.

Q. One final question, Mr. Klopfer. What words of advice do you have for other businessmen looking for western plant sites?

Mr. Klopfer: I will only say that locating in Alameda County was just about the smartest—and most profitable—move that Standard Register ever made. I am certain there is no finer location for business in the West.

Governments Create a Friendly "Climate"

Those who operate branch plants in MOA never fail to comment on the friendly climate governments have created for industry.

This is no matter of chance. It reflects universal recognition by County and City officials of the importance of industry to the economic well-being of this area.

Every year since 1936, the Alameda County Board of Supervisors and the Oakland City Council have appropriated funds to invite industry to locate in this area. Each year, these officials and the officials of other communities within the county, have taken steps necessary to improve our "product" and make it more attractive to industry.

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Like our "weather climate" the climate of government is unchanging—warm, friendly, non-partisan,—combining with other advantages to help industries "grow places" in MOA.

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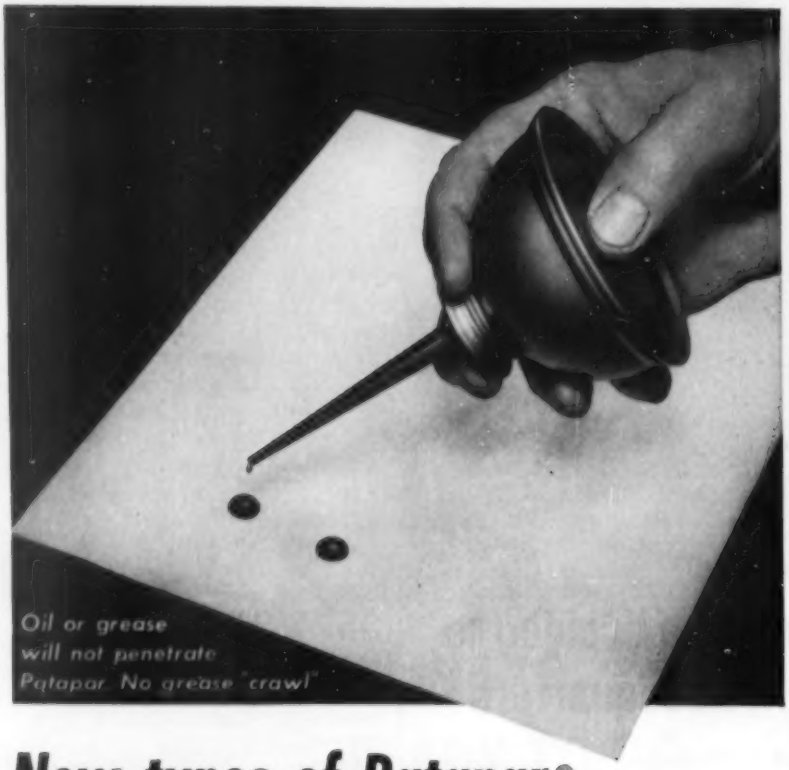
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eral increase since 1951. We have given merit increases. But almost everyone gets 'merit' increases on the basis of time, whether they're improving or not." And a personnel consultant adds that merit raises don't solve the basic problem because "they're still applied on the base of the lower original starting salary. A man who started at $50 today gets $120 after five years, sees raw cubs starting today at $90 to $100. He doesn't feel his salary has increased $70; he figures it's gone up only $20 for his five years' work."

But many outfits that must hire new employees at higher starting salaries cannot or will not fit general increases into their budgets.

• **"Don't Talk"**—A few warn new employees to keep their salaries secret. One insurance company goes so far as saying it fires any employee caught discussing salaries. A building materials company just says mildly, "We hope it doesn't get out." But most concede there's no hope on that score because "any office is a beehive of gossip."

• **Justification**—Sometimes personnel men find they can justify higher starting wages of newcomers on the basis of wide prior experience or training—but that's hard to do when the newcomer obviously has neither. Others don't bother justifying at all, find that after workers have been with them for five to 10 years, they're so tied in to welfare systems, pension funds, that they hesitate to walk out and can, except in special cases, safely be ignored. One personnel man says he handles complaints "by frankly telling the old-timer why the new youngster is worth as much as he is."

At least one outfit kept its people happy by adjusting its published salary ranges upward. Says an official: "Everybody was getting more than the minimum anyway, so we just brought our listed minimum up to what we were actually paying. That way it cost us nothing—and older employees can't complain that new people are coming in above the minimum."

IV. Hiring the Second-Best

A good many companies are trying to avoid the problem by not letting it arise at all. An electronics manufacturer reports it turned down a very badly needed accountant last week because he wanted $40 more than its starting rate. "You get caught in a vicious cycle if you start paying more. The minute you pay a new man more than your own people are getting, the others get dissatisfied, and leave. Then you have to get more replacements at an even higher figure."

• **Deliberate Policy**—As a result, many companies are deliberately hiring "second-best" help. One outfit fills all

MICRO precision switches

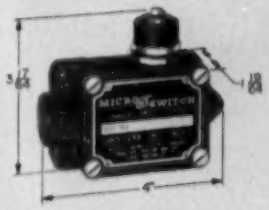
...THEIR USE IS A PRINCIPLE OF GOOD DESIGN

HONEYWELL

If you manufacture equipment which "MUST NOT FAIL" ...look to MICRO SWITCH

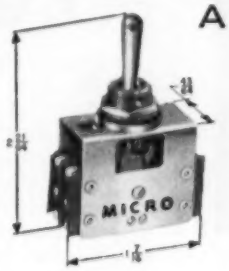
Must the equipment you make operate day after day—month in and month out—often for years, sometimes far from expert service facilities?

For two decades designers of this kind of device —business machines and equipment for industrial and military use—have found MICRO SWITCH precision switches the ideal components for products which must have no weak link. On this page are a few examples.



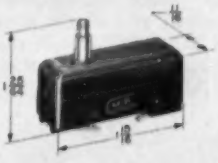
Quick response of switches speeds production 50%

The speed with which visual comparators check the fit and size of small parts, was increased 50% when the designers of a nationally known comparator chose two MICRO SWITCH precision switches to give fast, automatic positioning to the work. *Quick* and *dependable response* dictated their choice for this critical task.



A switch with a "memory" to simplify circuit designs

Because this MICRO SWITCH switch "remembers" the circuit actuated last, it promises to simplify many basic circuit designs in such equipment as radar units, computers and similar devices. This "memory" consists of signalling through a pilot light or buzzer to indicate which circuit was last actuated. The switch is sealed to prevent entrance of liquids and dust. Precision snap-action contacts assure long mechanical and electrical life.



Precision switches insure against equipment failure

Designers of ultra-sensitive heat-treating equipment for optical lenses had a real problem. The equipment must not only give smooth, efficient, everyday performance—it must do this with *little or no maintenance*, sometimes in overseas plants. MICRO SWITCH gave them this *long life*, and *absolute reliability*.

Have you tried increasing plant capacity the MICRO SWITCH way?

There is a way to boost the productive capacity of your plant—at extremely low cost.

It merely involves the installation of MICRO SWITCH precision switches to make present plant equipment more automatic and more productive.



Is your plant superintendent familiar with the MICRO SWITCH way to multiply work capacity? Ask him to write for MICRO TIPS DIGEST. It is full of live, practical ideas on how others have used these switches for profit.

MICRO SWITCH *Field Engineering Service is available for expert technical assistance on problems involving precision switches. Call the nearest* MICRO SWITCH *branch office.*

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New UNBRAKO socket cap screw locks itself, won't work loose

Eliminates costly wiring • Simplifies design • Reduces assembly time



"Plastic memory" of the nylon pel. let makes self-locking UNBRAKO cap screws reusable many times.

UNBRAKO socket head cap screws with the Nylok* locking feature are the first truly practical solution to the problem of making screws self-locking. Seated or not, they lock positively wherever wrenching stops.

A self-locking UNBRAKO socket screw is a single unit. This saves production time, because the number of parts you must assemble to get full locking action is reduced to the absolute minimum. Lockwashers under screw heads are no longer necessary. UNBRAKO cap screws with Nylok eliminate expensive wiring of cross drilled heads and are also burr-free. They simplify design.

A complete line of self-locking UNBRAKO socket screw products, in a wide range of standard sizes, materials and finishes, is available through authorized industrial distributors. Technical data and specifications are detailed in Bulletin 2193. Write us for your copy today. Unbrako Socket Screw Division, STANDARD PRESSED STEEL CO., Jenkintown 57, Pa.

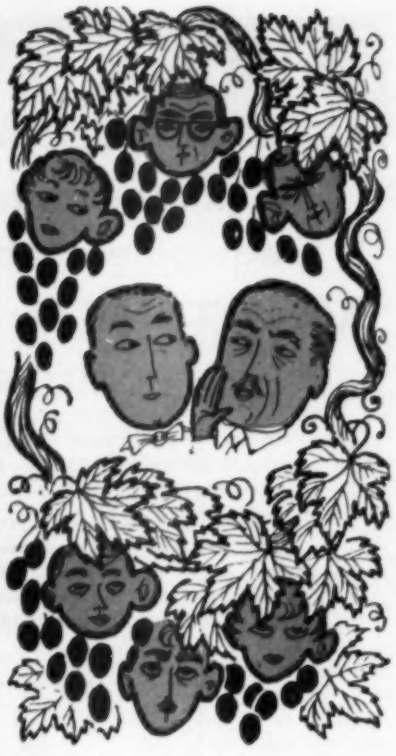
*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

STANDARD PRESSED STEEL CO.

UNBRAKO SOCKET SCREW DIVISION

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"Pst! Don't ever discuss your pay." Short cutting the old, hard climb.

vacancies from within—except at the very bottom level where it recruits directly from schools at what it concedes are lower-than-average scales. But it feels it would rather fill openings with less-than-qualified people and try to train them directly, than risk a morale problem.

Another company, typical of several interviewed, sets a rigid price for a job, sweats it out till it finds someone who will take that salary, rather than hire a possibly more qualified person who demands a higher price.

• **Danger**—Personnel men concede a definite long-term danger in this approach. "Barring a real depression," says one, "we're going to live with this manpower shortage for a while. There just aren't enough youngsters coming up. But we're wondering if we're not risking trouble by saddling ourselves with a lot of mediocrities, while the bright ambitious people go to someone else, who'll pay more and risk dissatisfaction."

• **Rule to Be Broken**—One method coming into wide favor has been the establishment of ranges, or brackets, of salary for each job. In theory, the newcomer can be brought in anywhere within the range without resentment being aroused. But some that use it find this system as troublesome as either the wide-open or the rigid scales.

In fact, companies that make the



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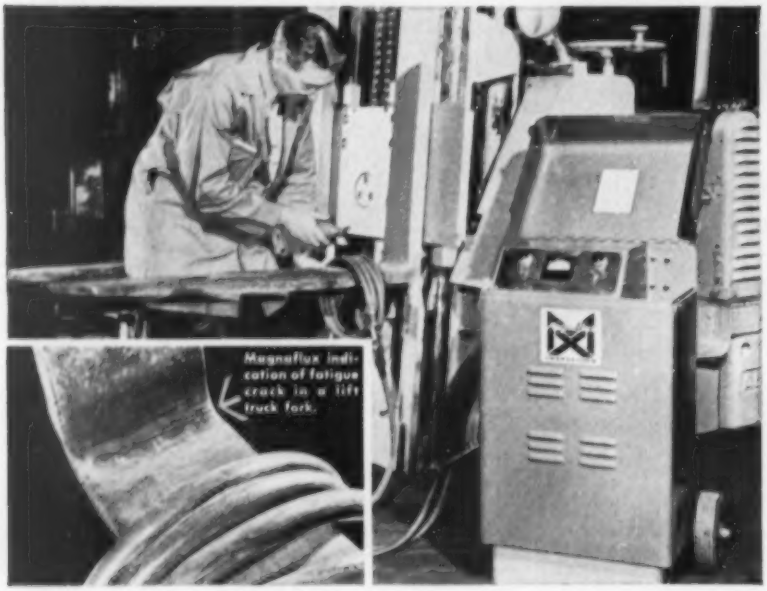
And where, as in the logistics of DEW line construction, *miniaturization* is the only answer, *copper is indispensable.*

In the Nation's defense or her industry's advance, copper is essential to products that are essential to progress.

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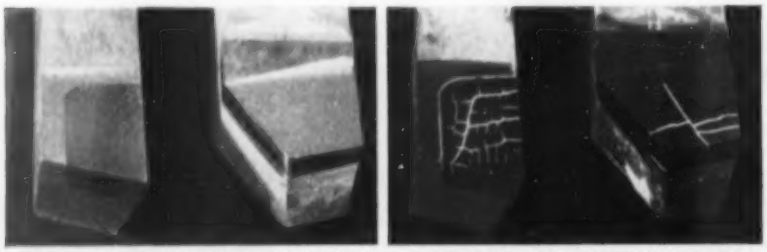
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most wide-spread use of ranges seem most willing to admit they'll exceed them to get someone they particularly need or want. When that's done, nominal additional duties are tacked to the job to justify a differential—or the new employee is deliberately classified in a higher level than the job normally carries.

V. Higher Brackets Hurt

Even without the exceptions, the ranges carry elements of friction in themselves. And the most grievous friction can arise among supervisors and lower and middle management men. At lower levels, where the bracket for a job may run from $250 to $300 a month, regardless of seniority, the slight differences involved rarely arouse feelings. But where the range for a specific job can run between $10,000 and $16,000, judgments become precarious and frictions fierce.

It's in groups within this salary range that staff losses are felt most acutely and replacements are most difficult to make.

Few take the position of one executive who, while he concedes that the gap between clerical workers and lower and middle management has been narrowing rapidly, snaps, "They just have to understand the problem." But there's little agreement on how to handle pay scales in this area.

• **Question of Morale**—Squeeze or not, says a personnel consultant, the lower-to-middle management groups are not too mobile. They're at a salary and prestige level inside their own outfit that they can improve only slightly by leaving—and they hate to forfeit benefit rights they've built up. "The problem now isn't how to avoid losing these people. It's how to keep their morale—and efficiency—high enough so that they don't become liabilities."

• **Three Tries**—Three companies, in the same business, indicate the variety of approaches. One tries to keep percentage ratios constant: No matter how starting levels may boost, the supervisor always makes 25% more than the highest-paid man under him. The second simply matches increases: The supervisor's actual salary rises, but the ratio between levels constantly decreases. The third doesn't bother to increase the supervisor's pay at all. It assumes "He's got other benefits considered valuable aside from salary—longer vacations, more sick leave, greater retirement benefits."

With the separation ratio dropping steadily, one oil company executive says he's waiting for the day when someone will refuse a vice-presidency because there isn't enough more money involved to justify the additional responsibility. END

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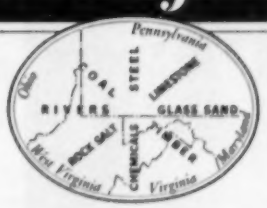
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Harried Management's Hideaway



HOT ROOM of Buffalo (N. Y.) Athletic Club is afternoon hangout for Steam Room Philosophers, a businessmen's group that seeks only "purity of thought, away from ordinary conditions" in its daily intellectual gab fests.

REPULSIVES is name that 13 brokers and financial analysts give their discussion club, which meets daily before opening of New York Stock Exchange. They've selected barroom as refuge for "thinking out loud, without pressure."



Step into the hot room of the Buffalo Athletic Club early any weekday afternoon and you'll see a knot of men huddled in animated conversation (top, left). The group is made up of local businessmen, including the president of a furniture manufacturing company, a newspaper publisher, a member of the Niagara Frontier Authority.

There's a common bond between this group and one that meets each morning at the otherwise deserted bar of Eberlin's Restaurant in Manhattan's financial district (lower, left): Their members—mostly business executives—seek refuge from the pressures and exigencies of modern business life.

Management men, to a far greater degree than most other citizens, are exposed to stress and strain in their day-to-day duties; decisions by day and homework at night give them fewer relaxed hours. Kiwanis and lodge meetings, luncheons at the club, and social affairs are more business than pleasure.

• **Escape to Relaxation**—But there's one type of organization that growing numbers of executives are turning to—one that occupies a special niche in the management man's heart. It's the sometimes zany, sometimes sober discussion club. Listen to husky, mustachioed T. Thomas Madsen, a Wall Street broker and one of the 13 members of the Repulsives who meet at Eberlin's before the 10 a.m. stock market opening: "This kind of thing gives us a chance to do some thinking out loud away from the pressures of home and office."

• **False Facade**—At first glance the atmosphere and attitude of the Repulsives, Buffalo's Steam Room Philosophers, and similar clubs seem entirely frivilous. But there is a serious purpose behind the facade.

Explains Millard C. Faught, president of Retirement Council, Inc., and charter member of the Tangibilitators, a group that meets monthly in a New York hotel: "We are darn near out of refuges in which to think. Modern life is virtually a conspiracy against reflective thought. We're trying to combat this." The Tangibilitators once tried meeting at members' homes, but found the amenities of domestic living were a restraining influence.

A betoweled member of the Steam Room Philosophers adds: "When you're discussing something with someone under ordinary conditions, you're overawed by his crown. But in the steam room, purity of thought alone prevails."

• **Nationwide**—Sans fanfare, these

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highly informal and semi-serious discussion clubs are operating in business centers across the country. Most of their members hail from the ranks of top and middle management, but often include consultants, college professors, and a sprinkling of newspapermen.

But the clubs provide more than a place for intellectual exercise, camaraderie, and occasional fun. Says one clubman: "Trace back almost any enduring idea and you'll find it came out of some group of men who had time to get together for bull sessions."

Today's executive bull sessioneers make no pretense at as high a goal as a great and original concept, but they do feel they derive some concrete benefit from participation. A member of New Orleans' Society to Compel Reformers to Un-reform says: "We'll trade ideas, information, business contacts—and blondes' phone numbers." The Society's almost-daily meetings at Turci's restaurant are, this member adds, "as informal as a longshoreman's brawl."

• **Loyalty to Refuge**—It is this very informality that accounts for the grim loyalty of club members. They're under no social or business pressure, and can say what they want and hold the floor as long as they want. Says a member of New York's Socratic Round Table: "The toughest thing about being creative today is that someone in authority—either your wife or a business associate—is taking potshots at you."

Many of the groups view talk of engaging in civic activity with a jaundiced eye. Most have no formal membership requirements, dues, rules, bylaws, or officers. Those that do have such trappings generally use them only to illustrate the differences between their groups and the more orthodox businessmen's clubs. For example, the officers of Atlanta's Breakfast Club (among its members: a handful of local bank presidents, the president of Southern Bell Telephone & Telegraph Co.) bear the titles Ace, King, Jack, and Joker. Its motto: "We aim at nothing, and never miss."

Many of the clubs invite various experts to join their discussions and provide members with a target at which to throw ideas. W. Benton Harrison, financial vice-president of Sylvania Electric Products, Inc., brought a friend to a Tangibilitator's session one evening to talk about semantics. The man didn't utter a word because the group started arguing about the subject while he was being introduced and didn't stop long enough to let the guest speak. Sometimes, it takes more than a sharp mind to survive such discussions. One of the Steam Room Philosophers quips: "The man with the lowest blood pressure, who can sit



How Airkem rescued millions of cookies

Fire in a plant of one of the world's largest baked goods manufacturers doomed $400,000 worth of cookies. Shipping cartons costing $40,000 were contaminated by the heavy smoke and left unusable. Management found that another supply of cartons was unavailable for several months and was faced with prolonged business interruption and heavy losses in product sales. Airkem Smoke Odor Service, however, quickly and completely killed the odors in the irreplaceable cartons. Millions of fresh-baked cookies, cakes and candies were shipped without loss. No smoke odor losses were suffered, nor was business interrupted. Cost of this service was slightly more than $1,000!

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in the hot room longest, always wins the argument."

• **Gab Fests & Ideas**—And just what do the members talk about? Says one man: "Most of the time we talk about why people act like people." Another chimes in: "It's a wonderful oven in which to anneal an idea."

Some of the club meetings are little more than undisciplined gab fests in which members may venture far afield from intellectual topics. But others do exercise some form of discipline. Generally, these less free-for-all organizations require each member in turn to bring a "bone" for the others to chew on at the next meeting. His task is to come up with some subject for fruitful discussion, and perhaps bring along an authority in the field.

• **Results**—Many ideas that the members use in business and their private lives came out of, or were improved upon, at their discussion club meetings.

One discussion that the Tangibilitators held on retirement problems led some of the members to form the Retirement Council, a retirement consulting firm. In the 1930s, a downtown Manhattan club called the Tipsters helped form the New York Society of Security Analysts.

• **Mixed Minds**—Membership of most of the clubs cuts across many types of businesses and professions. This enables the group as a whole to draw on a diversity of views, attitudes, and backgrounds. "We're all interested in things beyond our desks," explains Harrison, a member of the Tangibilitators. "The presence of a handful of professors or journalists rounds out the group. There's no conflict between the business manager, the academician, and reporter; good ideas are no respecters of persons." The membership roster of the Richmond Forum, for example, includes Virginius Dabney, editor of the Richmond Times-Dispatch; George M. Modlin, president of the University of Richmond; Richard S. Reynolds, Jr., president of Reynolds Metals Co.; W. Harry Schwartzchild, Jr., president of the Central National Bank; and John Cook Wyllie, librarian of the University of Virginia.

• **Prerequisites**—Usually new faces are brought into club folds simply by invitation of one of the members. A lot of initiates, unaccustomed to the hard give-and-take discussions are overwhelmed and just sit and listen. Says one New York executive: "I've collected more intellectual scar tissue at these sessions than anywhere else." Before a man is admitted to membership in the Richmond Forum, for example, he must be considered able to provide "intellectual stimulus," and his attitude should "be one of open-minded curiosity and willingness to exchange ideas." END



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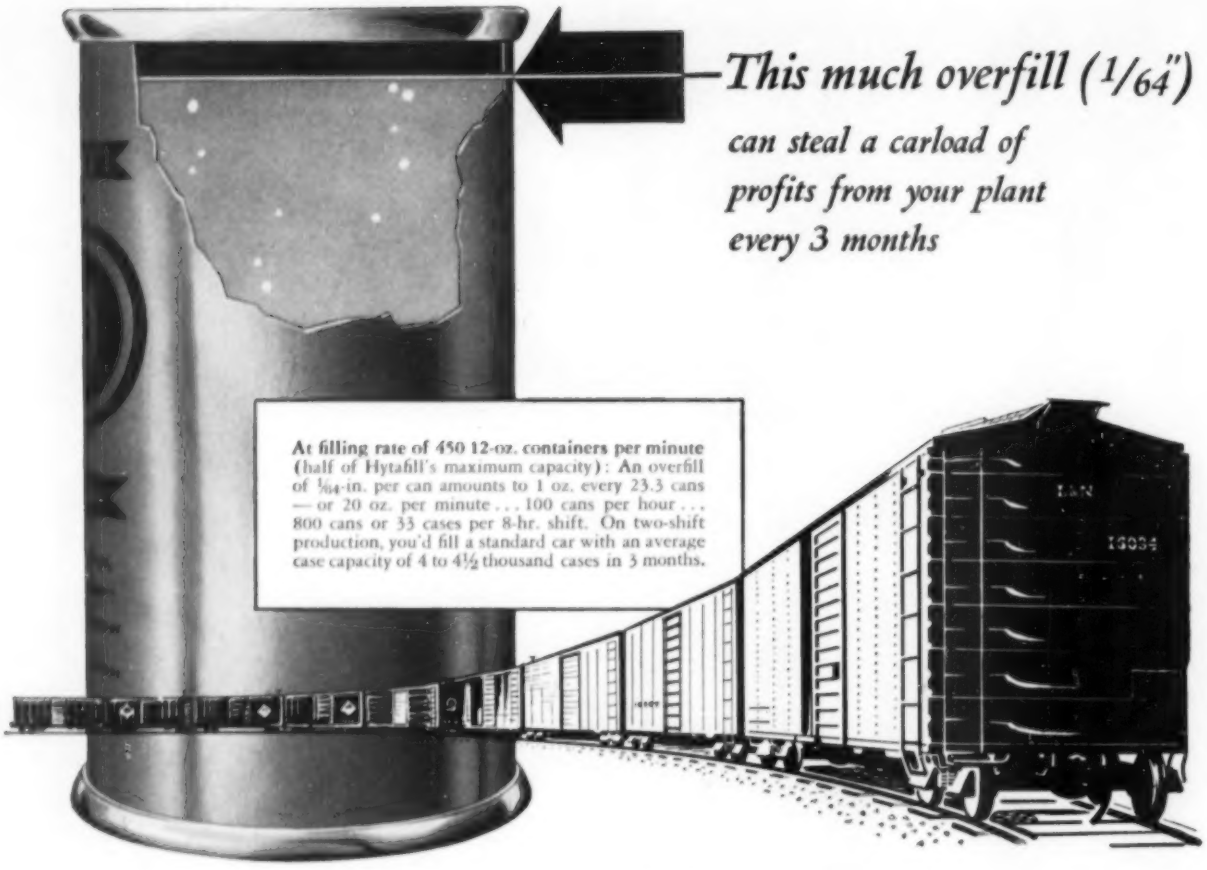
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Underwood Does Pruning Job

Lays Plans for Future Growth

Underwood Corp.—trimming fat and a little flesh—is revamping its stock setup, writing off overvalued inventory and equipment, and taking losses for the next quarter. The aim is to clear the decks so that new office products, plus expansions in the growth field of computers, can push the company into the black for 1957, and send it on the upward path from there on, says new management.

Last week Underwood got stockholder O.K. for an increase in the number of authorized common shares from 1-million to 1.5-million that is to cover conversion of a planned $5-million convertible debenture issue, and to provide trading stock for possible future acquisitions.

Recently the company had written off some $4.2-million in inventory, tooling, and development costs. It took operating losses of a little over $1-million in July and August. But some $3.8-million of this loss becomes a tax credit.

High manufacturing costs and consequent low profit ratios are a large part of Underwood's trouble, says the new president, Fred Farwell. He counts on plant modernization to bring costs into line.

After shaking his company down, Farwell plans to push it up to new highs by heavy sales and advertising of newly designed office equipment (typewriters, adding and accounting machines, and the like), plus development of computer applications. For a major part of its future business, Underwood looks to "data flow," peripheral punched tape and punched card equipment, its Elecom 50 (a small office computer), and the Elecom 125 (a medium-sized computer). It has orders on the books for much of this equipment, and the Elecom 125 will get its public unveiling on Nov. 6 when Underwood's Park Avenue computer center is turned over to ABC television to tally up election results.

• • •

N. O. Nelson Pushes Own Plan

To Head Off Full Reorganization

N. O. Nelson Co., St. Louis supplier of plumbing, heating, and refrigeration equipment, has a plan to head off the reorganization—under Chapter 10 of the federal Bankruptcy Act—that is being sought by minority stockholders and creditors (BW—Sep.15'56,p84). Nelson was one of the companies drawn into the now-crumbled empire put together by Sydney L. Albert under the wing of Bellanca Corp.

On Oct. 18, federal Referee in Bankruptcy William J. O'Herin will hear the proposal, under which Nelson would borrow $2.2-million each from Chicago's Walter E. Heller & Co. and Bankers Life & Casualty Co. The loan, at 6%, would be payable in five years. The plan calls for immediate paying off of $2.3-million debts.

The company has $1.7-million outstanding on a previous loan from Heller, on which it had been paying 12%. This sum is included in the new loan with interest revised downward to 6%. **Heller is participating in the new financing to help keep Nelson operating and thus protect its investment.**

Bankers Life has an interest in Nelson through substantial holdings in Automatic Washer Co., Newton, Iowa, which owns 97% of Nelson's common stock.

Nelson presently is in control of a receiver—Elliott H. Stein, an investment broker with Scherck Richter Co., St. Louis—under Chapter 11 of the Bankruptcy act. As receiver, Stein will recommend action to solve the company's financial problems. He has control of all operations of Nelson and can approve or disapprove the proposed new financing.

• • •

New Full-Time Pilot Takes Over

Company Shaken By Proxy Battle

Virginia-Carolina Chemical Corp.—the Richmond (Va.) fertilizer producer whose dropping sales volume kicked off a noisy proxy battle ending in the installation of new management last July (BW—Aug.4'56,p.104)—has finally found a full-time president to guide its course. The new management—which has been reimbursed to the tune of $83,000 for expenses of the recent vote battle—forecasts a rise in company sales and profits for the next year.

William Franklin, Baltimore soft drink manufacturer and one of the successful insurgents, has been acting as VCC's temporary president. **He now turns the presidency over to William H. Wilson, 40-year-old executive vice-president of Standard Fruit & Steamship Co.**

"We were looking for an administrator more than a chemical man and chose Wilson for the job he did of building up Standard Fruit," says Franklin, who steps up to chairmanship of the board.

• • •

Textron Cuts Back in Textiles—

But Stays In To Keep Tax Credits

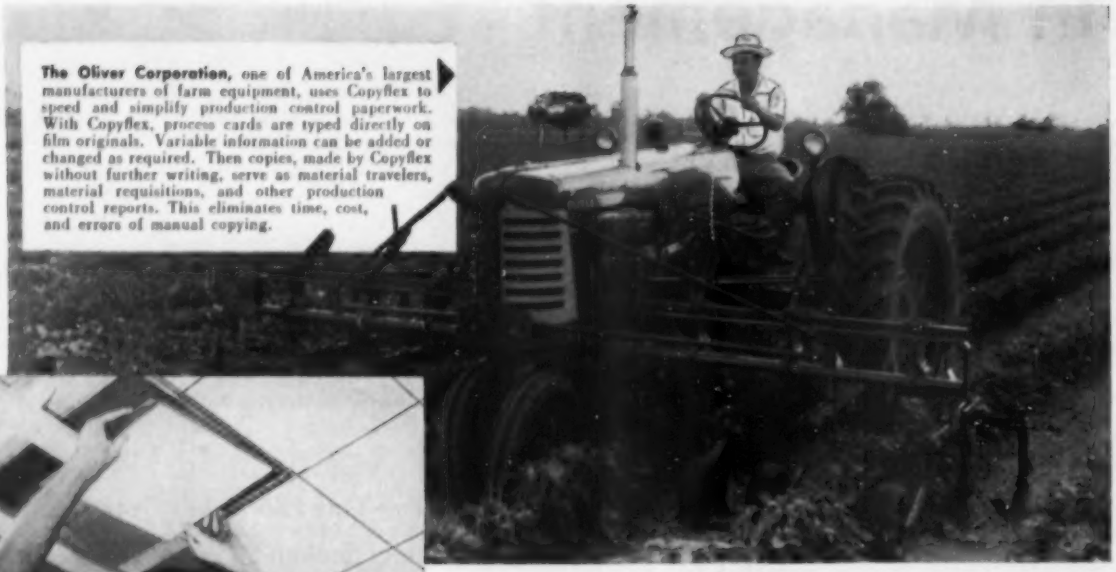
Textron, Inc., anxious to cut continuing textile losses—especially since these offset profits from its diversification program—is shrinking its Amerotron operation.

Amerotron last year had a sales potential of $150-million. It's being cut back to a profitable core operation of $80-million in worsted, finished, and gray goods

Textron had originally planned to spin off its textile business altogether. However, in view of Internal Revenue Service rulings on the new tax code (BW—Jan.14'56,-p.41), it will hold onto part of the business to safeguard its tax loss credits.

Cutting down volume and selling inventory should free some $5-million in working capital for more profitable operations.

Five plants—three in New England, one in Georgia, one in North Carolina—will be sold off to free even more capital, says a spokesman.



The Oliver Corporation, one of America's largest manufacturers of farm equipment, uses Copyflex to speed and simplify production control paperwork. With Copyflex, process cards are typed directly on film originals. Variable information can be added or changed as required. Then copies, made by Copyflex without further writing, serve as material travelers, material requisitions, and other production control reports. This eliminates time, cost, and errors of manual copying.



The Celotex Corporation, world-famous manufacturer of building products, uses Copyflex to prepare important cost and financial statements on a fast one-writing basis. One application involves detailed plant cost statements which are made up on original forms at the various Celotex plants. From these originals necessary copies are mechanically produced by Copyflex. This has eliminated time previously required for typing statements from original work sheets.

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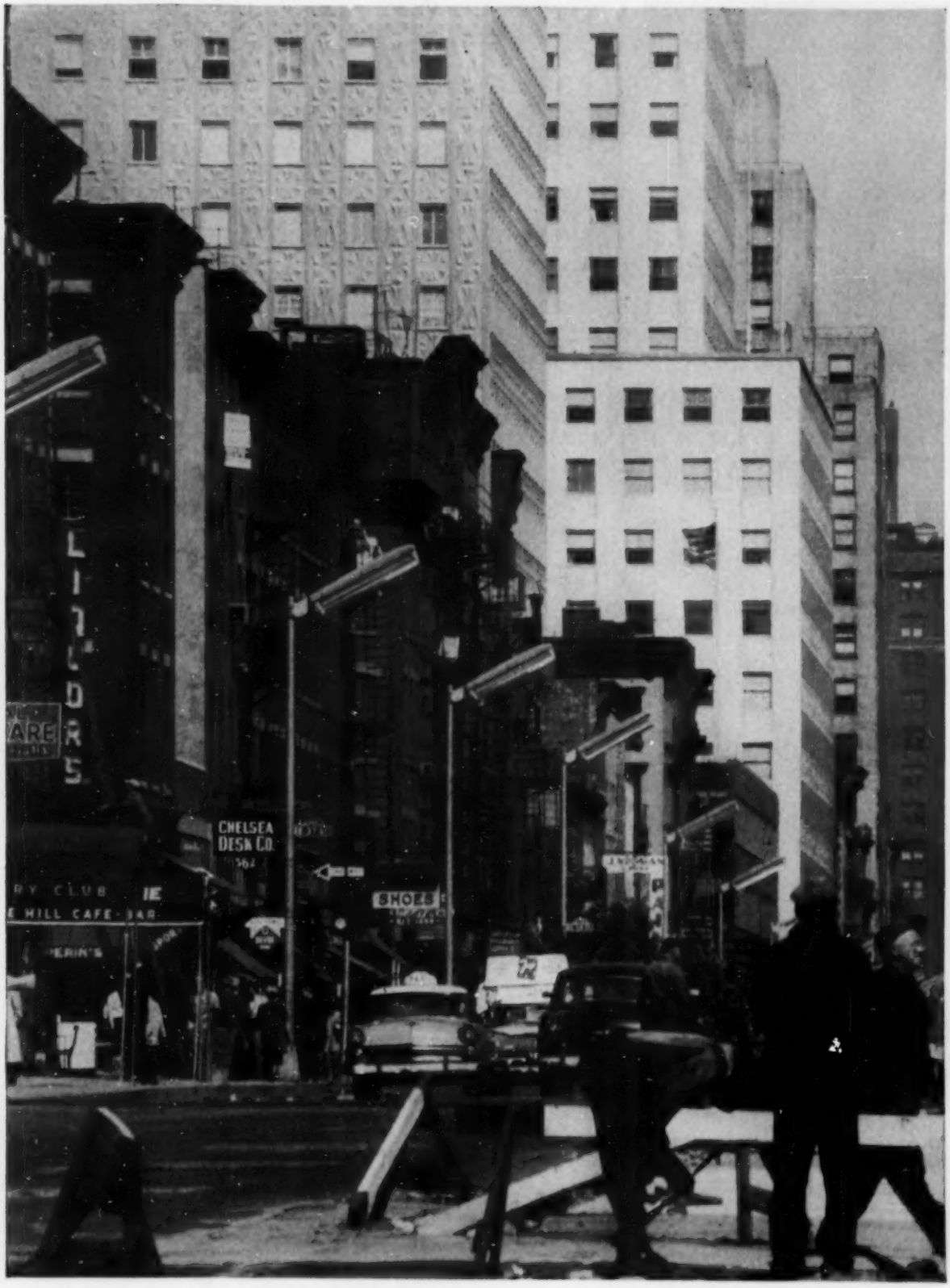
New York: Its Business Is Bigness

New York is the paradox of U.S. cities. It's so big it is cramping its trade, its manufacturing, its population. Even so, bigness is its life and its function — it's where you go for the tricky loan, the tops in vice-presidents, the smart idea or the latest dress design, or any of a million more unusual things.





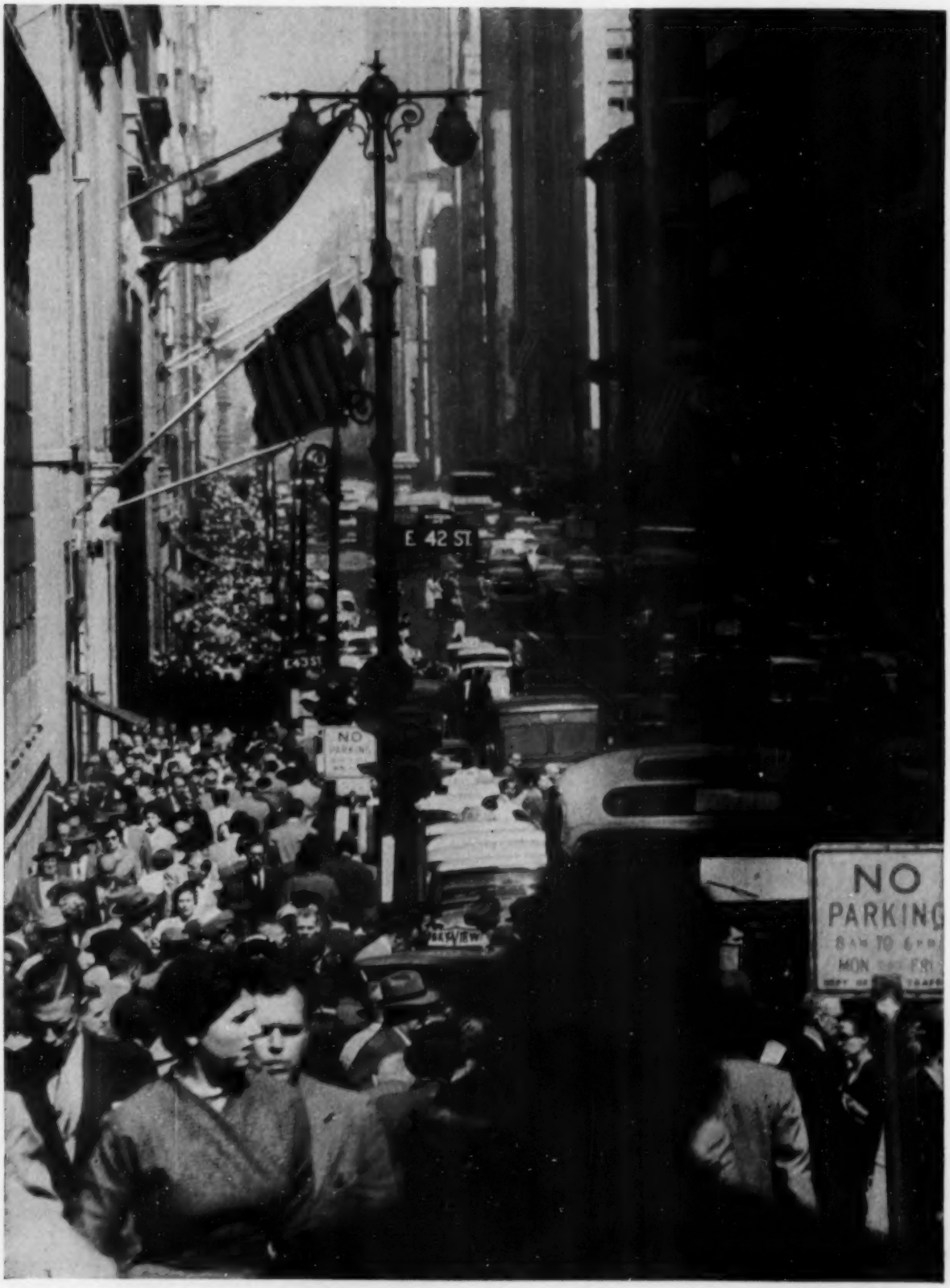
LOWER EAST SIDE holds cheap tenements, low-rent public housing. Moving westward across Manhattan, the first key avenue is . . .



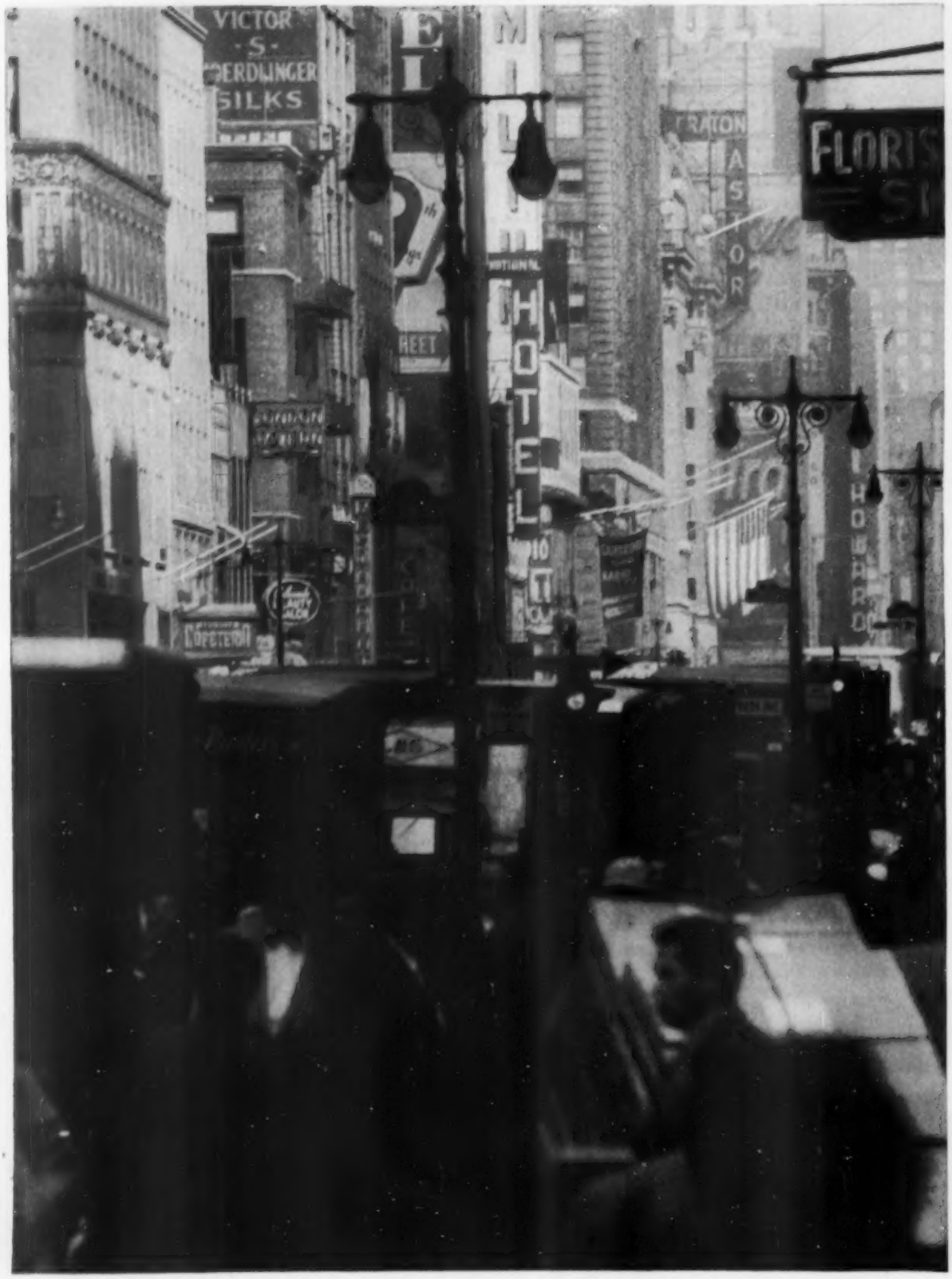
THIRD AVENUE, brightened by tearing down of elevated railway. It will probably be the site of future office development.



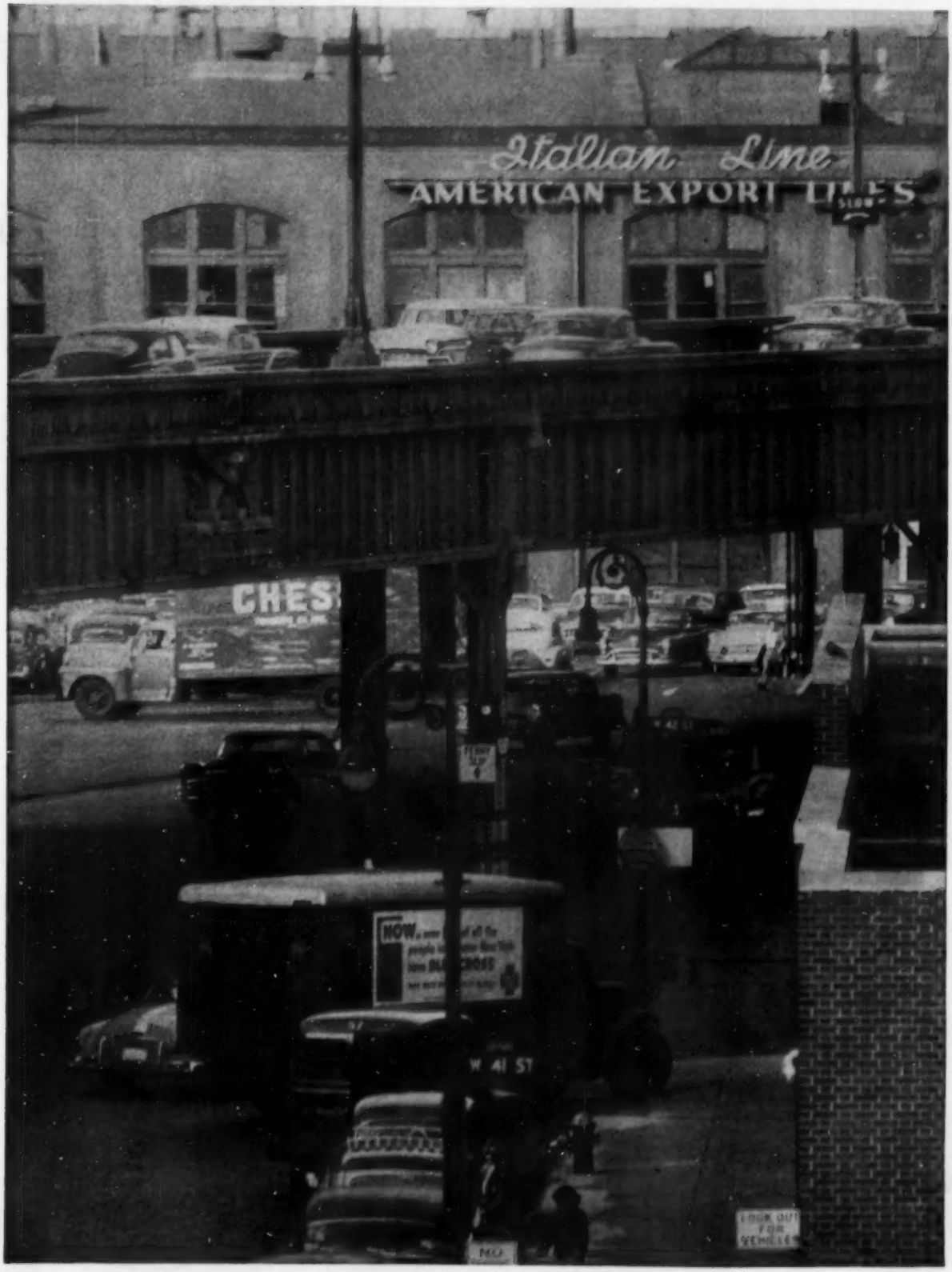
PARK AVENUE, two blocks west of Third, has seen much of New York's fantastic postwar office-building expansion, as has . . .



MADISON AVENUE, Park's westward neighbor, haunt of admen. Companies from everywhere move here to be near each other.



SEVENTH AVENUE shows plight of city's manufacturers. Crowding, high rents make harsh environment for garment industry, while on the . . .



WEST SIDE, bordering Hudson River, crowded streets and overworked port facilities are stifling commerce, once city's backbone.



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The City

The journalist E. B. White, though introduced to New York City at an early age, apparently had difficulty getting used to it. "It is a miracle that New York works at all," he wrote once, suddenly aghast. "The whole thing is implausible."

To many businessmen who live and work in the nation's biggest city, and to many others who visit it from time to time, the sense of implausibility is familiar. The fact of New York's existence can't be doubted, but the reasonableness of it can and often is. The city seems much too big to operate efficiently. There is enough of it to make 20 other cities, and even these would need copious subdivision for sane administration. Civic planners often wonder why New York was not long ago strangled by its own huge complexity. They sometimes think that if one small ganglion in its monstrous, overworked nervous system should break down, the whole structure would disintegrate in horrible confusion.

But there is a reason for New York. It is not the same reason for which the city was built, but an equally good one in terms of 20th Century needs. New York is in business for the prime purpose of being the nation's biggest city.

• **Supermarket**—Every industrial nation needs a biggest city, an overgrown metropolis that offers a complete range of goods, services, information, ideas, and men. You can get most things in most cities, but you can get them all in New York. Equally important, there is a wider variety to choose from. Somewhere in New York there are offices where you can order oilfield equipment, find an expert in Indonesian affairs, buy expert counseling on corporate diversification problems, or learn facts about the rabbit bandicoot. Virtually everything in the world can be had either at first hand in New York or by means of contacts established there. In a sense, New York is a world supermarket.

It offers not only things, but men. The big corporations, U. S. and foreign, that maintain offices there do so not only because the city is a supermarket, but also because it teems with executives of other companies with which

Story starts on page 125

Whose Business is Bigness

they deal. New York is a gigantic communication device. Here, the California manufacturer works out a deal with the French distributor; the man with an idea meets the man with money. Often accused of being a high-pressure city, it could hardly be anything else. It is a magnet for big men, big deals, big money, and big ideas.

New York provides a life-giving environment for these things because of its sheer size. Bigness, more than anything else, is its function.

• **Paradox**—In this lies an explanation of the paradox of New York. The things that are traditionally considered as giving vitality to a city—trade, manufacturing, population—are sagging in New York. Its population has all but ceased to grow; its trade and manufacturing growth is lagging far behind that of the country as a whole. Yet the city is explosively alive, and its national and world importance are growing steadily.

How can this be? The answer comes back to New York's role as the biggest city. It is unique. Its health can't be assessed by the disease symptoms of other cities, for its metabolism is not the same.

New York began life as a seaport, branched thence quite naturally into commerce and manufacturing. Big finance moved in next, followed by a host of supporting business and personal services. As this growth continued, it began to stifle the very things that had originated it—commerce and manufacturing. Transportation into and out of the city grew ever more molasses-like; real estate values climbed inexorably; the whole cost of doing business in the city became unreasonable. The importance of trade and manufacturing consequently began to wane.

In classical theory, this would have left the city half paralyzed—a huge lump, limp and useless. But the city had already begun to make a function out of sheer size. This function is what keeps it busy today.

I. The Gold Rock

Since the end of World War II, new office space built or definitely planned in New York City has amounted to 26-million sq. ft. This is almost as much office space as now exists in the entire city of Chicago (30-million sq. ft.). It illustrates New York's function of size.

The companies moving into all this acreage are doing so principally to be near each other, to be at the center of things. It is useful to be so close to executives of your clients, suppliers, and other corporate associates that you can have lunch with them or visit them without disrupting your week's routine. The saving in transportation and phone costs is big; the saving in wear and tear, and the increase in efficiency and speed of action, are incalculable.

Add to this the multitude of services, geared for big-scale demand, offered by the city. It's easy to see why New York has become a nesting place for head and branch offices representing companies across the country, around the world.

• **The Cities**—Most of the massive increase in New York office space has risen on Manhattan Island. The city proper also includes four other boroughs: Brooklyn, the Bronx, Queens, and Staten Island. Outside the city limits is another great region commonly associated with New York, the so-called New York Metropolitan Area. This is a 22-county circle taking in hundreds of city-oriented commuter towns in New York State, New Jersey, and Connecticut.

In this circle, all roads, tunnels, bridges, and railroads lead to Manhattan. This rocky island is the nucleus of the city; of all counties it is the most crowded, the most expensive, and the most glamorous. On the lower half of it, the nine square miles from Central Park to the southern tip, some 2.3-million people work.

The majority of them work in office buildings; and as their number grows, the increase will be almost entirely in office workers. It is hardly worth any private builder's while, now, to build anything on Manhattan but offices. To put up such a structure costs an average $25 to $35 per square foot of floor space; but with companies clamoring to pay $5 and more per foot in yearly rentals, the venture can pay off.

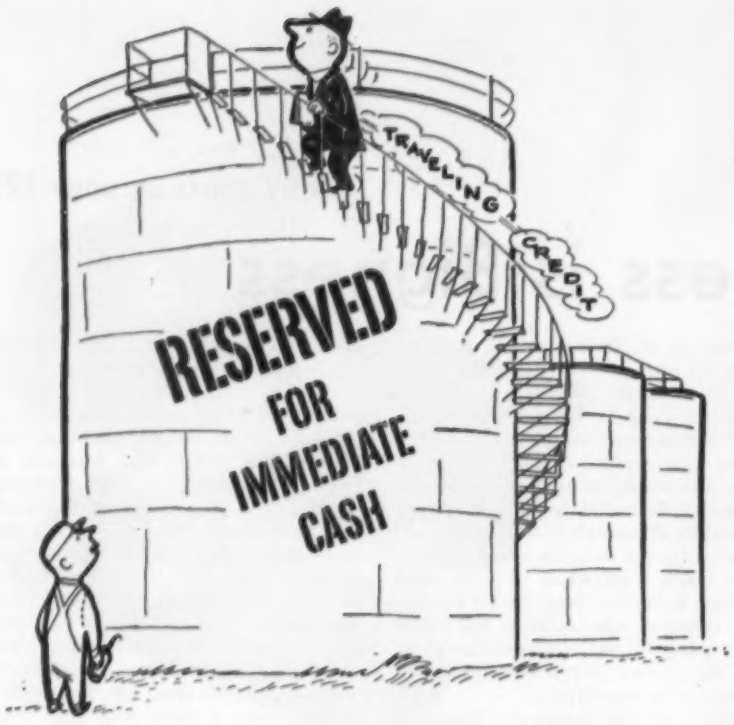
• **Inhabitants**—Most of the postwar office development in the city has taken place in two Manhattan areas: "midtown," an upperclass corporate community taking in Rockefeller Center and Grand Central Terminal, and to a smaller extent the financial or Wall Street district. In the midtown neighborhood, Socony Mobil Oil Co.'s aluminum-sheathed structure and Lever Bros. Co.'s startling glass house, supported disconcertingly on stilts, are probably the most striking examples of new construction. In the Wall Street area, the Chase Manhattan Bank plans an enormous, $75-million development that promises to dominate the district as Rockefeller Center dominates midtown.

Numerous trends through the years have threatened to slow down this furious rush for acreage in the clouds. But the idea of being in New York is so pleasing to companies that no reason for not doing so, however logical, has been able to deter them for long.

It was thought shortly after World War II, for example, that the trend to decentralization of management would reduce the need for large central or even branch offices in New York. It didn't. No matter how autonomous its units, a company still felt that it could benefit by locating key executives in the key communications city.

• **Exiles**—Also shortly after the war, as New York costs rose to ever more fantastic levels, there was much talk among businessmen of locating offices around the periphery of the Metropolitan Area—in the suburbs where land costs and taxes were low, where traffic flowed free and fast, and people could live close to their jobs. Some companies tried it, and most who did regretted it.

The singing of birds turned out to be a poor substitute for the dedicated roar of the city. Executives felt isolated, away from where things were happening. They missed the lunch clubs, the secluded cocktail nooks, the glamorous receptionists, the sidewalks crowded with men on fiercely purposeful missions. Women employees missed the big city stores, and as a result good secretaries were hard to attract. It was also discovered that in



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the Metropolitan Area, where all roads lead to Manhattan, it is virtually impossible in many cases to commute by public transit from one suburb to another.

Sorrowfully eying the distant Manhattan skyline, many a self-exiled company realized that New York's bigness, while attended by many evils, nevertheless is the soil in which management thrives best.

II. Emigrants

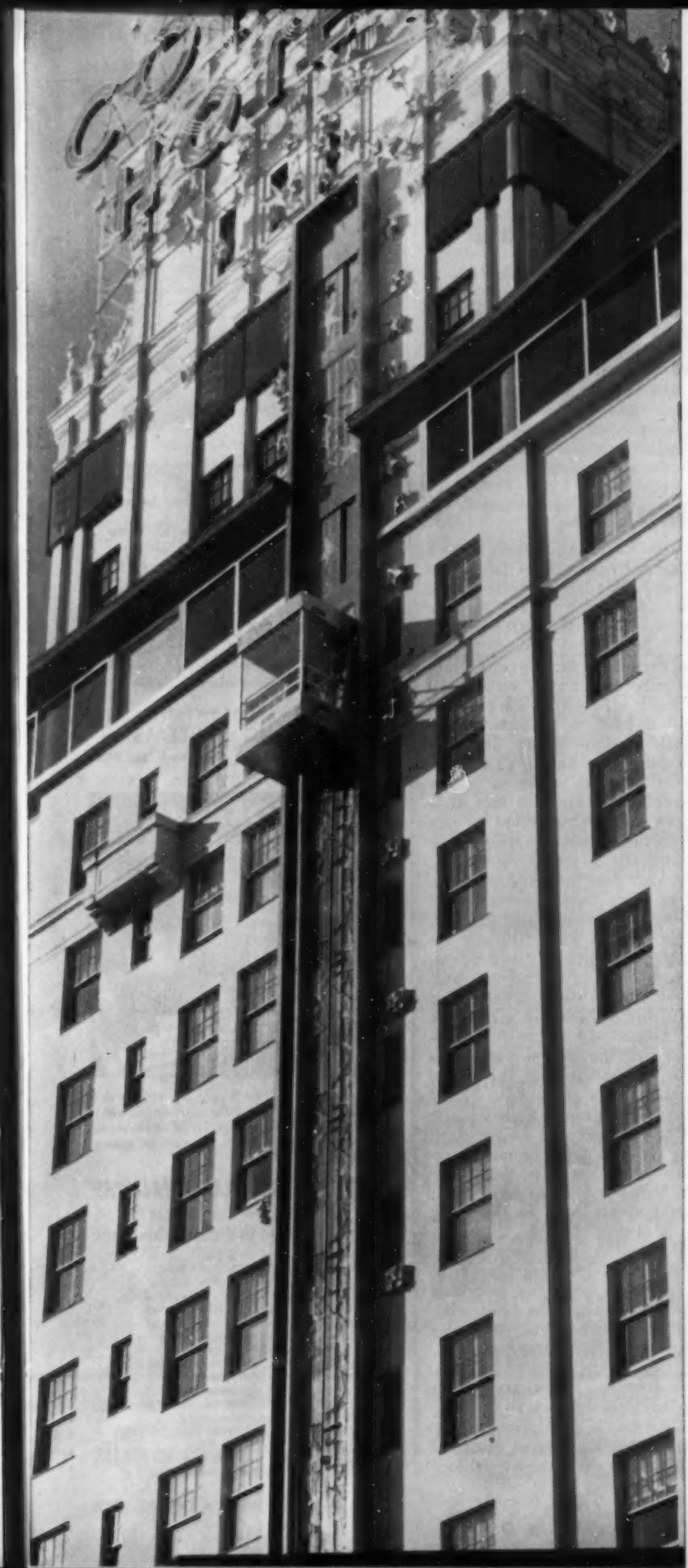
While Manhattan offers the world to a management office, it offers little to the average manufacturing plant. To a much smaller but still important extent, the same is true of the other four boroughs. Manufacturing employment in the city, according to a New York State survey, fell from 1,080,000 in 1947 to 968,000 last year; and there is no reason to believe the downward trend will stop.

A few kinds of manufacturing industries like New York or feel they must be there. Among them is the garment industry, which inhabits an incredibly jammed district on Seventh Avenue. This industry is made up largely of small companies, dependent upon one another for their livelihood. The entire industry could conceivably pack up and move elsewhere in a mass migration, but few companies could do so alone with any assurance of staying alive. Established here long ago, the industry is forced to stay.

Companies making small, costly products such as instruments or electronic devices—in which transportation is a small part of the cost—can also live in the harsh climate of New York. But the city is not friendly even to these manufacturing operations.

• **Climate**—The ways in which it is not friendly are numerous. Possibly the most discouraging of all is the cost of New York real estate. On Manhattan especially, almost the only economical use of land is as a base on which to put a tall building. Many manufacturers in recent years have found that the opposite kind of building, long and flat, is best suited to their needs.

In sections of Brooklyn, Queens, and the Bronx, land is cheaper—though still not cheap enough to be handled extravagantly. Some manufacturing plants have been built there since the



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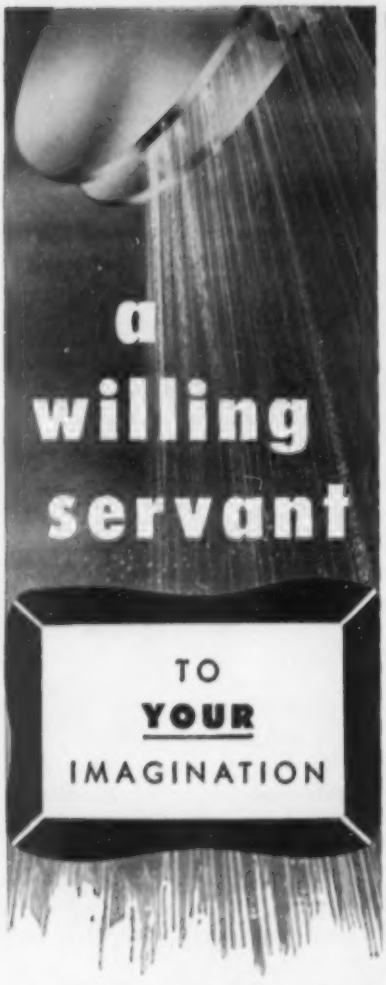
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war. Most current plant-building in the New York region, however, is being done in outlying parts of the Metropolitan Area, notably in New Jersey. Land there is plentiful, transportation relatively uncomplicated, taxes relatively low. A New Jersey company can take advantage of New York's port and the Metropolitan Area's huge consumer market without battling the city's bigness.

III. The Millions

A visit to New York is likely to be a harrowing experience, even for a citizen of some other large city. In its enthusiastic attention to bigness, the city expects the individual to take care of himself. The native New Yorker cherishes the privacy that this gives him, but the visitor comes away with a feeling of great, cold unfriendliness. He may find it hard to understand why more than 8-million people live in a place so inimical to human comfort.

Most of them do so for no reason more complicated than that they work in the city and cannot afford to buy houses in the suburbs. Others have come to the city to pursue big dreams; for New York breathes an atmosphere of success in its most generous sense, and a dream can flourish there and even come true. Others are in the city for intellectual or artistic stimulation, others merely to be left alone. Still others, the people whose dreams have come true, live in expensive apartments on Park Avenue and Sutton Place, unwilling to quit the success-charged atmosphere of the city for the quiet, bland breezes of the suburbs.

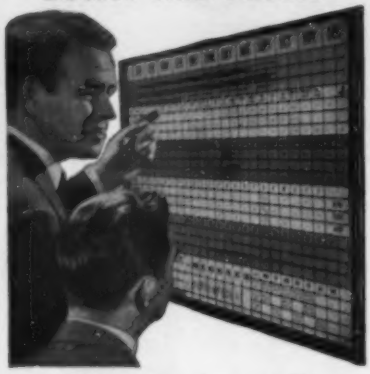
Among these people, there is one group notably absent: the middle class. Backbone of civic and economic accomplishment in most cities, the middle class has virtually deserted New York. The reason comes back to the city's unique role of size.

• **No Boom**—The only vacant land now existing in New York City is in outlying parts of Queens and on Staten Island, whose development awaits construction of a high-volume bridge to connect it with other parts of the city.

In all other parts of the city, you have to demolish something before you can build anything new.

Coupled with the high price of New York real estate, this makes construction costs so high that a private builder

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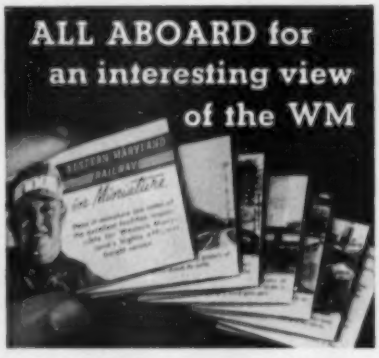
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can hardly hope to swing anything on his own but an office building or a high-rent apartment house. He can assume fairly safely that the office building will fill up quickly and stay filled with prosperous corporate tenants. In the apartment house, he can unabashedly collect rentals of $75 a month per room.

Thus, the rich are provided for. The poor are being helped by government—federal, state, and city. By condemning and clearing slum areas, building apartment skyscrapers on the land, and then operating the building at a loss—with rentals of $15 to $20 a room—government has been able to provide adequate housing for some of the city's low-income families. Some 70,000 dwelling units have been so built since the end of the war.

• **Outcasts**—The low-income families not yet given good housing—some of them living several families to the room in tenements without adequate heat or light—are by and large economically stranded where they are. The middle class, however, is more mobile. When it is dissatisfied in one place, it can get up and leave. This is what New York's middle class is doing.

Unable to afford $75 per room and unwilling or not qualified to live in low-rent public housing developments, middle-income families have fled and are still fleeing to the suburbs. With long-term mortgages and easy down-payment requirements, especially in the case of war veterans, it is often about as easy to buy a suburban home as to rent a New York City apartment. Many a middle-income family, giving up the search for a city apartment that is both down to its price level and up to its standard of excellence, has been forced to the suburbs even though it doesn't yet consider itself really ready for home-ownership.

• **Title I**—New York's best hope of holding onto a nucleus of middle-class families lies in Title I of the 1949 National Housing Act. Under Title I, a city can buy slum land and sell it to a private builder at a cut price. Two-thirds of the loss is absorbed by the federal government, one-third by the city. The builder, thus aided, can build apartments in New York to rent for around $40 a room. Some 27,000 dwelling units are now contracted or proposed under Title I in the city.

• **Re-Mix**—But Title I building is far too small to arrest the middle-class emigration from New York. Of every 10 New Yorkers living in the city in 1940, one had left by 1950. The one-tenth—some 750,000 people—was made up mostly of middle-class families heading into the green country in search of better living. Others are following at about the same rate.

While this has been happening, the



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city's total population has grown, but slowly—so slowly that it is considered to have reached a plateau. While the middle class was moving out, others were moving in. The largest group of newcomers in the past decade has come from Puerto Rico, escaping their crowded island in search of jobs.

By sheer necessity, New York's record of racial mixing is remarkably free of conflict. Complete tolerance is not yet a fact. As Puerto Ricans have moved into formerly white neighborhoods, white residents have moved out. This has given an extra push to the middle-class trek into the suburbs.

In the 1920s and 1930s, Negroes migrating from the South took over formerly white neighborhoods just as Puerto Ricans are doing now. The result has been a steady change in the city's racial makeup. In 1950, the population was 87.3% white, 9.6% Negro, and 3.1% Puerto Rican. By 1970, population experts guess, the mix will have changed to 72%, 14.5%, and 13.5%. In Manhattan alone, it will be 54.6%, 23.4%, and 22%.

It is all inextricably tied up with the fact of New York's bigness. The huge demand for office space, a direct result of bigness, raises land values and cuts down the building of new dwellings. What dwellings there are grow older and older (some 20% of dwelling units in the city are half a century old, or more). Hardly anyone puts big money into rejuvenating these ancient neighborhoods, for big money is more interested in offices. The neighborhoods deteriorate, until finally only low-income families and struggling young dreamers are left.

IV. The Daily Swarm

In the Metropolitan Area—including New York City, neighboring Jersey City and Newark (N.J.), smaller cities, and suburban towns—live some 15-million people, nearly one-tenth of the entire U.S. population. Shortly after breakfast and shortly before supper each weekday, the whole area seethes with unparalleled commutation.

Somehow, the middle-class office workers who took their families to the suburbs must get back into the city to earn a day's pay. The problem this presents to the Metropolitan Area is

enormous, and the fact that almost every worker gets to his desk on time almost every morning is one of the things that make New York implausible. Like E. B. White, the city's transportation experts live with a nightmare expectation of a last great traffic jam, starting at some remote intersection, backing up throughout the city, and strangling it for all eternity.

A third of a million people commute to New York daily from New Jersey, Connecticut, Westchester County (mainland New York State), and Nassau and Suffolk Counties (Long Island). The city's subways and buses collect about 5-million fares a day. In a typical year, over 75-million vehicles cross the Hudson River between Manhattan and New Jersey, and over 160-million cross the East River on the other side of the island.

Mass movement on such a colossal scale could hardly be without problems for the city administrators. It isn't.

• **Traffic**—The streets of New York have been pushed near the limits of their traffic-carrying capacity. Despite all the city's efforts to smooth traffic flow by means of one-way street systems, carefully timed traffic lights, and a determined attack on parking problems, the streets remain badly clogged.

The principal cause of the clogging, of course, is sheer volume of traffic. If there were a city in which all buildings were limited to one story, you would presumably have to add new streets as you added new office space. But New York, being built principally on islands, has had to expand upward rather than outward. Thus, while the space available for people increases steadily, the space available for their earth-bound cars hardly changes at all.

To make matters worse, the thousands of trucks that serve the city's people and businesses must often park in the streets to do their loading and unloading. There are old buildings everywhere with no adequate loading facilities. Especially in the garment district, trucks line both sides of the streets, leaving a single lane for through traffic.

Passenger-car parking is another problem. There just is not enough space to accommodate all the cars that come into the city, or travel from one section of it to another. One school of thought holds that the lack of parking space is a good thing, for it discourages many people from driving into the city. The opposing school argues that inadequate parking only aggravates the situation.

• **Remedies**—Traffic Commissioner T. T. Wiley takes a view halfway between the extremes. He would like to provide off-street parking for "produc-



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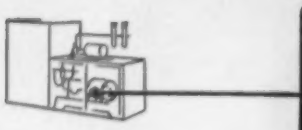
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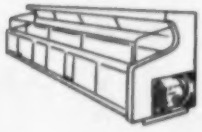


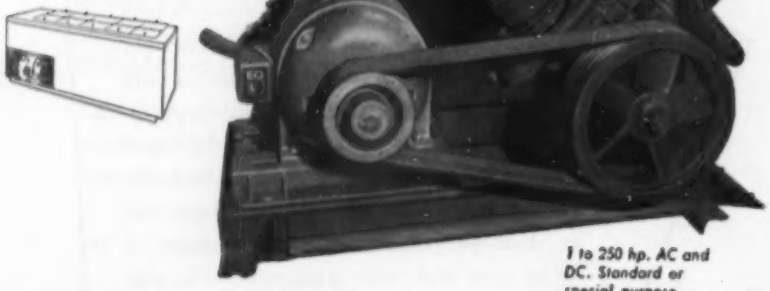
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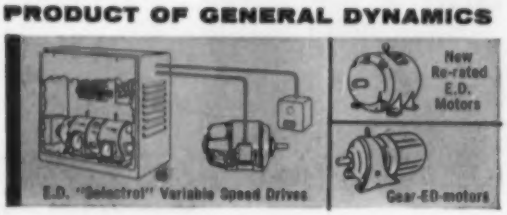
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tive traffic"—people driving to stores, offices, and the like. But he would discourage all-day parking by commuters. For this reason, the city tolerates extremely high rates charged by private parking garages; it is felt that this helps cut down all-day parking.

To cut down traffic in Manhattan, the most congested part of New York, the city hopes to build more arterial highways by which traffic can avoid Manhattan streets if its destination is not actually there. Among ideas now being considered are two elevated expressways across the island—in effect, an upward expansion of road space to follow that of office space.

• **Subways**—But the most efficient means yet devised to move people around in a crowded city is the subway. New York would like to extend its subway system into areas not now served, in the hope of reducing automobile traffic. A bi-state commission representing New York and New Jersey is even studying the possibility of pushing city subway lines under the Hudson River and into New Jersey. But all these plans are hobbled by lack of money.

The city-owned subway system has managed to ring up small operating surpluses for two years now, largely by having raised the fare from 5¢ to 10¢ to 15¢. But no expansion program as big as New York needs could be financed out of fares. The city will need to borrow—and it is already heavily in debt for its transit system.

V. Government for Bigness

To solve the problem of transportation, some thinkers advocate putting all aspects of it—bridges, tunnels, highways, subways, buses—under a giant Transportation Authority.

The "authority" as a tool of government has been used with great success in New York. Essentially, an authority is a unit set up by a government to carry out some such project as building a bridge or operating a port. The unit is granted power to borrow money for the purpose. Then, in effect, it is cast adrift from the government. It keeps its own funds separate from those of its creator. Its purpose is to carry out the project and pay off the debt out of operating revenues—in the case of a bridge, for example, out of tolls.

The main advantage of an authority

is that, as a separate body, it is beyond the debt limits and can cut across the geographical limits that hamper its creating government. In New York, for example, the bi-state (New York-New Jersey) Port of New York Authority has the job of promoting the port and operating airports, truck and bus terminals, some tunnels, and some bridges. The city's Triborough Bridge & Tunnel Authority operates other facilities.

• **Helping Hand**—In the gigantic task of keeping New York under control, authorities can help the city government by taking whole areas of responsibility off its hands. But these bodies are by no means universally accepted in New York as an unmixed blessing.

It's true that they can tackle large, costly projects that the city government is unable or disinclined to tackle itself, and that they can untangle some of the complications involved in the fact that many city projects affect three states. But in some ways, authorities resemble small governments. There's bound to be friction between them and the popularly elected city government. Some men begrudge authorities any self-supporting property that the city has paid for, others around City Hall complain that these powerful bodies are not under close enough control by the voters.

This dual government setup has probably not reached its final form. Those who advocate a giant Transportation Authority absorbing the present authorities, argued that, by this means, profitable bridges and tunnels could help pay for unprofitable subways. But they feel such an authority must be more responsible to the people. Others hold that a metropolitan government for the whole area is the only answer.

• **Lost Voters**—Clearly, the whole relationship will be evolving over the coming years. Whether or not a super-authority would be helpful in solving some governmental problems of bigness, it would hardly help at all with the problem that some consider most worrisome of all: the fact that the middle classes take little part in the city's political life. The young executives, engineers, and accountants who do much of the new thinking in other cities are absent in New York. They are doing their thinking for the benefit of suburban towns.

But so far, none of New York's maladies has hampered its growth as the giant U.S. city, the city at the center of almost everything. The establishment of the United Nations there has confirmed the direction of this growth. Almost officially, and for all practical purposes, New York is the capital city of the world. **END**

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In Business Abroad

• • •

Survey Finds U. S. Industry Gets 78% of Foreign Aid Buying

The government's foreign-aid program is money in the pocket for U. S. companies. Or, at least, that's the way it looks according to a study soon to be released by the International Cooperation Administration.

From April, 1948, to June of this year, the study says, the government laid out $30.4-billion in military and non-military aid. **Of this huge outlay, $23.7-billion or 78% was spent for U. S. goods.**

In economic aid, $11-billion or 71% of the $15.5-billion handed out went for purchases here; in military spending, $12.7-billion or 85.2% of the $14.9-billion.

The study also points out that in fiscal 1955, foreign aid financed 17% of total U. S. exports—as little as 4% of iron-steel and machinery exports, as much as 30% of cotton exports.

• • •

Reparations From West Germany Build up Israel's Merchant Fleet

Israel is building up its passenger and merchant fleet with credits from the 1952 reparations agreement signed with West Germany.

Last week, the West German shipyard, Deutsche Werft, launched the Theodor Herzl—a 10,000-ton cruise liner and the fifth ship the yard has built for Israel. Under the agreement, other German yards have already built 20 small and medium-sized ships for Israel.

The 1952 agreement handed Israel $822-million in credits to be spent for German-made goods or products—British oil, for instance—bought through West Germany. So far, Israel has used up about a third of these credits. The deal has not only financed Israel's economic development, but also linked its business attitudes and economic planning closely with West German thinking.

Israeli citizens, in the near future, will also get money under the recent agreement with West Germany covering personal claims against the Nazis. An announcement in Tel Aviv last week put the amount of these claims at around $300-million.

• • •

Trade Across the Iron Curtain Is Growing—But It's Still Small

Trade with the Communist satellite countries of Eastern Europe is still only about 3% of total Western European trade. But it's increasing this year, and will continue to increase next year—according to the latest report from the U.N.'s Economic Commission for Europe.

Western Europe's 1955 exports to the satellites were 12% greater in value than 1954 exports. This year's deliveries for the first five months were 14% over the corresponding period last year. Similarly, Eastern Europe's exports to Western Europe in 1955 were 30% ahead of 1954, this year were 17% ahead of 1955 for the first five months.

ECE traces the increased East-West trade to stepped-up industrial fairs on both sides of the Iron Curtain and to the tendency—especially in East Germany and Hungary—to put trading deals more in the hands of companies rather than state trading monopolies. ECE notes another point, too: During 1955, manufactured goods for the first time made up a larger share of the satellites' exports to the West than did food.

ECE also says Poland, which shipped nearly 10-million tons of coal to Western Europe last year, is becoming the largest net coal exporter on the Continent.

• • •

Britain Speeds Up Atom Power In Face of Suez Threat to Oil

The Suez crisis, with its threat of an oil-supply slowdown, has speeded Britain's plans for developing nuclear power in peacetime applications.

The government has decided that after 1958, all newly constructed power stations will use nuclear energy. In addition, British ship designers have stepped up work on atomic-powered ships—after lagging behind U. S. and Russian developments in this field. **Five British industrial groups reportedly have come up with the design for an atomic-powered tanker that would need refueling only every two years,** thus be able to bypass the Suez Canal and take the route around Africa at a low operating cost.

• • •

Business Abroad Briefs

Massey-Harris-Ferguson, the Canadian farm implement manufacturer, is putting its new Ferguson tractor into production at Standard Motor Co.'s Coventry plant. Massey-Harris expects to make 100,000 tractors annually for the British and overseas market.

A $10-million Export-Import loan has been granted to Italy's Fiat company for modernization and expansion of its auto and aircraft production.

The Pacific area—as well as Western Europe—is getting the tourist dollar. With world cruise passengers spending nearly $4-million there—25% above last year—tourism is beginning to boom in the South Sea islands, reports American Express.

Procter & Gamble is setting up an Italian subsidiary to produce and market food products, chemicals, perfumes, and detergents.

Bethlehem Steel is reportedly the highest bidder—so far—for the purchase of British-owned St. John Delrey Mining Co., which owns rich gold, asbestos, and iron-ore property in Brazil.



France Trys to Offset

French Africa (map, left) is a vast region emerging from a colonial past. Frenchmen had dreamed it might develop a new French civilization (pictures). But Africans are pulled by conflicting forces: Islam, Arab nationalism, spirit of independence.



THE OLD WAYS of Arab life are exemplified by this market in French Morocco, under the shadow of the Atlas Mountains. The masses cling to these ways.



FRENCH INFLUENCE, as in this French bank "skyscraper," is strong in Casablanca,

Nasser in Struggle for Africa

THIS WEEK's Suez deliberations at the United Nations (page 165) involve an extra interest for France: the future of French Africa.

Ever since Pres. Abdel Gamal Nasser brought his revolutionary government into power in 1951, he has been keeping the nationalist pot boiling in Africa. The Cairo radio has preached to the most violent of the North African nationalists, has tried to foil any settlement between the Moroccans and the Tunisians on the one hand and the French on the other.

Now Cairo aids the Algerian rebels —with arms as well as propaganda—and will similarly try to prevent any settlement between the Moslem nationalists and the 1.2-million French in Algeria.

• **Spreading Influence**—What especially frightens Paris these days is the threat that Nasser's growing prestige holds for the rest of French Africa. Unless the West can effectively answer his grab of the Suez Canal, France's influence must suffer. In the past 20 years, Mohammedanism has jumped the Sahara Desert and made great headway in converting West African Negroes (table, page 148). Propaganda from Cairo plays the theme that Christianity is for white men, while Islam has no color bar.

A propaganda victory for Nasser in French Africa would upset the development plans of several French and other European firms. Two U. S. companies involved are U. S. Steel and Bethlehem Steel. Bethlehem is participating with a French combine in the development of iron ore reserves in French Equatorial Africa; in the same region, U. S. Steel owns 49% of a planned manganese development.

• **New Colonial Policy**—French leaders are trying not to repeat the mistakes of Indochina, not to lose the resources and potential markets of French Africa. Since spring, a whole new colonial policy has been taking shape in Paris, along the pattern of postwar British policy in Asia and Africa.

In the coming weeks you are likely



French Morocco. Casablanca is a modern city, now the second largest in Africa.



THE THREE R'S are taught to adult Negro tribesmen in French Togoland, as part of France's effort to bring a polish of French culture to West Africa.

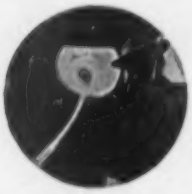


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". . . mineral resources are known to abound throughout the area, but they have only just begun to be developed . . ."

STORY starts on p. 144

to see evidence of this new French attitude. Before the U. N. Assembly meets in November, the government of Premier Guy Mollet hopes to have a new basis for North African settlement that would cut the ground from under France's anti-colonial critics. And on Oct. 28, the 1.3-million Togolanders under a French U. N. trusteeship will vote on whether they want to set up a "republic" in the French Union. The question remains: Has this about-face in French policy come too late?

• **Resources Galore**—You get some idea of France's stake in Black Africa from the fact that the government has put $260-million into capital equipment for the federation of colonies called French West Africa. The money has gone for mining equipment, transport, and communications.

Mineral resources are known to abound throughout the area, but they have only just begun to be developed. There is bauxite in Guinea, phosphate in Senegal, diamonds and manganese in the Ivory Coast, lead and zinc in M'Fuwait, and copper and tin in West Ubangi. Equatorial Africa is particularly rich in timber, too.

More than a dozen companies are prospecting for oil in the Sahara, West Africa, and Equatorial Africa. Only a few days ago, a French company struck oil in the Algerian part of the Sahara. Most geologists are convinced that the great and largely unexplored desert has important oil reserves.

• **Postwar Empire**—On resources like these and on the expanding population of French Africa—now more than 50-million—some Frenchmen after World War II hoped to reestablish worldwide leadership for their country.

Furthermore, many French intellectuals were imbued with what they called "France's civilizing mission." It was France's role, they said, to spread the principles of French democracy and Western European humanism to the underdeveloped peoples of the world. And they said France's traditional lack of a color bar fitted it peculiarly well for such a mission.

This heroic role was short-lived, however. The parts of the 1946 constitution relative to the overseas territories were a disappointment to France's colonial peoples. Overseas delegates to the second house of the French parliament got a small voice in legislation. While the constitution roped Algeria into metropolitan France, Moslem citizens of Algeria were left out of any role at all in the government.

• **Uprising**—While France spent its force and fortune—aided by the U.S.—in trying to stamp out the Indochina revolt, few reforms were instituted in Africa. By 1954, when the decision against the French finally came in Indochina, Morocco was in full revolt and Tunisia was demanding independence. Then Algeria, wedged in between the two former "protectorates," flared in civil war.

Today, Tunisia and Morocco have been given "independence" with a reservation that they shall be "interdependent" with France. What this "interdependence" means is yet to be defined. It's certain, however, that the Tunisian and Moroccan settlements won't stand unless the Algerian question is solved.

One idea that seems to be gaining ground is some sort of federation among the three North African territories that can bear a special relationship to France. The chief barrier to such a settlement is the fear of the Europeans in Algeria that they would be swamped in a sea of Moslems. No one has yet come up with details of a settlement that will please both the Europeans and the nationalists.

One possibility is a North African federation headed by Habib Bourguiba of Tunisia (BW—Mar.10'56,p130) and the anti-Nasser Sultan of Morocco. It would be another pole of attraction for Arab nationalism—to pull support away from Cairo. But it is still only an idea.

• **Black Africa**—At the same time, France is grasping for a policy in Black Africa to replace the old policy of assimilation. No longer is Paris trying to make Africans into black Frenchmen. Ten years ago, African educated classes were willing to become French intellectuals. That's no longer the case.

In West Africa, trade unions have withdrawn from the French Communist-dominated C.G.T. and the Socialist-dominated Force Ouvriere. They are setting up local federations and asking for international affiliation in the Communist WFTU and the anti-Communist ICFTU. More and more politicians are withdrawing from the metropolitan political parties to associate themselves with local groups—even with the all-Africa RDA (Democratic Rally of Africa).

Nor has this shift stopped there. It's significant that some of the Togolanders are agitating for complete independence from France in the Oct. 28 elections. They say France and its French Union have little to offer them but a capital-short, high-price econ-

how to judge a fluorescent lamp . . . point no. 9



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FRENCH AFRICA

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North Africa		
Algeria	9.5	852,600 (770,000 in the Sahara)
Morocco	7.5	172,104
Tunisia	3.7	48,300
West Africa		
Mauritania	0.5	415,900
Sudan	3.3	450,500
Senegal	2.0	80,600
Guinea	2.2	106,200
Niger	2.1	494,500
Ivory Coast	2.2	123,200
Upper Volta	3.1	105,900
Dahomey	1.5	43,800
Equatorial Africa		
Gabon	0.4	103,000
Middle Congo	0.7	132,000
Ubangi-Shari	1.0	238,000
Chad	2.2	96,000
UN Trusteeships		
Cameroons	3.0	166,800
Togoland	1.0	21,500
Somaliland	0.06	9,000
Madagascar	4.3	230,500
grand total	50.26	5,060,404

= predominantly Moslem

Data: French Information Services

omy. Some Togolanders would like to join their tribal brothers in British Togoland who are moving to federate with the Gold Coast. As the state of Ghana, that will soon become the first Negro member of the Commonwealth (BW—Jul.28'56,p92). However, in Ghana, there is notably slight nationalist opposition to retaining ties to London and the Commonwealth.

• **Something to Give**—Still the French feel they have something to sell—their culture—to a people, who as yet have only begun to develop a civilized society. The French find satisfaction, too, in the fact that even Moslems among West Africa's Negroes complain of Cairo's brand of Arab racism.

There are growing signs that the French hope that, by sponsoring rather than fighting local nationalistic feelings, they can retain their influence and play a role in developing Black Africa.

Under a law enacted last June, the government is permitted to set up local governments affiliated with Paris. The French think this approach, which they call "federalism," as opposed to their previous policy of centralized political representation in Paris, may be the way out of the dilemma. But they hope it can be carried out more effectively than their lamented postwar policy of assimilation. END



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Swapping Debts...

. . . among European creditors is bolstering Brazil's trade balance, and getting exports on the seas again.

Last week, delegates of seven member countries in the Brazilian multilateral payments union—called the Hague Club—gathered in Rio to review the first year's operations of the agreement. The verdict: It works, and works well.

What the Area of Limited Convertibility (AGIO in Portuguese) means is complicated in practice but fairly simple in theory. It permits European creditors of Brazil to trade with the South American republic in each other's semi-blocked currency. For example, if a British exporter wants to sell something to Brazil but Rio has a shortage of sterling, he can take payment in AGIO marks.

These marks cannot be converted to sterling or dollars, but they can be used for payment to Germany for British imports. Actually, of course, these transfers are handled at government level through the European Payments Union.

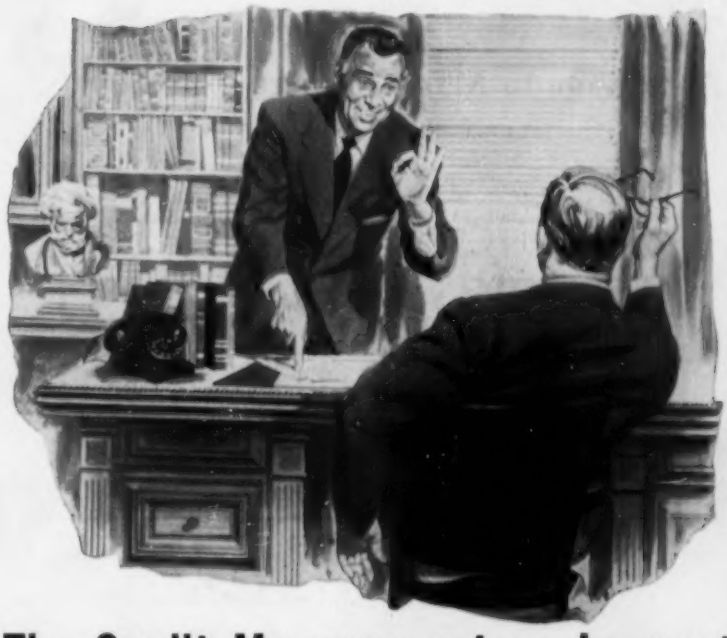
• **Results**—When the club went into action last fall, Brazil's trade with Europe was in a bad way. It owed Britain £60-million ($168-million) and imports from the U.K. had come to a standstill.

Last week the Brazilians were able to report that trade balances were looking better and better. Rio finance experts say the multilateral swapping of debts has taken hold, that $50-million worth of European currencies were brought up by Brazilian importers in the third-quarter of this year compared to $20-million worth in the second quarter. That means that imports are flowing.

• **Skullduggery**—There was some grumbling at Rio last week. The European members of the club—the original three founders, Britain, Germany, the Netherlands, and now Belgium-Luxembourg, Italy, Austria, and France—complain that Brazil's multiple exchange rate system allows for skullduggery. For example, Brazilian importers can bring in goods from a high-priced AGIO country through a low-priced AGIO country. The Brazilians say that they will clear up this kind of thing, point out that their present trade agreement with Yugoslavia will not be renewed because of such "switch" deals.

Meanwhile, everybody seems ready to get into the act. Representatives of Norway, Sweden, Denmark, and Finland have been invited to Rio to join up. And there's been talk of Japan joining. **END**

"—it's that new Credit Manager of yours!"



The Credit Manager gets a bouquet

"Bill, I'll only take a minute!" The Sales Manager sounded even more urgent than usual.

"Sure thing, Jack, come in and sit down." The Treasurer took off his glasses and regarded his visitor across the desk. "What's your worry this morning?" he asked.

"Worried? Who says I'm worried? I'm happy! Look—" and the Sales Manager emphasized the word with a forefinger stabbed at the desk top, "—it's that new Credit Manager of yours! Well, he's not so new, any more, but you know what I mean: he's no old timer!"

"Now, Jack, if you're going to hold that against him—" the Treasurer began, but his gentle voice had never been a match for the other's rush of words.

"Hold it *against* him? Bill, *I'm* not holding anything against that fellow! *I* came to praise Caesar, not to bury him—or whatever the man said. *You* know! Bill—" and the Sales Manager's voice took on a note of anguish at having been so misunderstood, "—*I* think he's done a terrific job! Above and beyond the call of duty, or however the saying goes! Why, Bill—" and his voice dropped the note of anguish to take on a confidential tone, "—do you know how much of our sales increase we owe to him?"

The Treasurer put his glasses back on and literally stared at the other. In his utter amazement, he was incapable of answering the other's rhetorical question. But there was no need. The Sales Manager swept right on.

"Only a few days ago, he came to me and told me we weren't selling Apex Corporation hard enough! Imagine!" The Sales Manager grinned fondly at his own recollection. "Your *Credit Manager* telling *me* we're not selling an account hard enough! I nearly threw him out of my office, but darned if he didn't *prove* it to me! And this morning—" the Sales Manager stabbed the desk top again, "—we sold Apex our biggest order!"

"Congratulations!" the Treasurer's tone of voice was mild.

"Thanks!" said the Sales Manager. He got up briskly. "Well, I just wanted you to know the best thing this company has done in years was to make the Credit Manager's job more important and bring in a really good man to fill it. Since he persuaded us to insure our accounts receivable with American Credit Indemnity, we've penetrated areas we hadn't *touched* before!" The Sales Manager became enthusiastic all over again. "Why, we've been able to project our Sales plans a full *year* ahead!" he cried. "And—since a few days ago—we've begun selling our established accounts harder than ever! Well—see you later!"

The Treasurer took his glasses off again and smiled. "I'll tell the young man what you've said."

"No need!" the other said from the doorway. "I'm taking him to lunch and telling him myself!" And he was gone as urgently as he had come.

• • •

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And if *financing* is your problem, Pennsylvania's state-sponsored 2nd Mortgage Fund helps assure *100% financing for your new plant* (thus reducing demands on your working capital).

The scope of services available to you, indicated below, suggests how sincerely the Commonwealth of Pennsylvania welcomes your inquiry.

For: Industries . . . Consulting Engineers . . . Industrial Realtors

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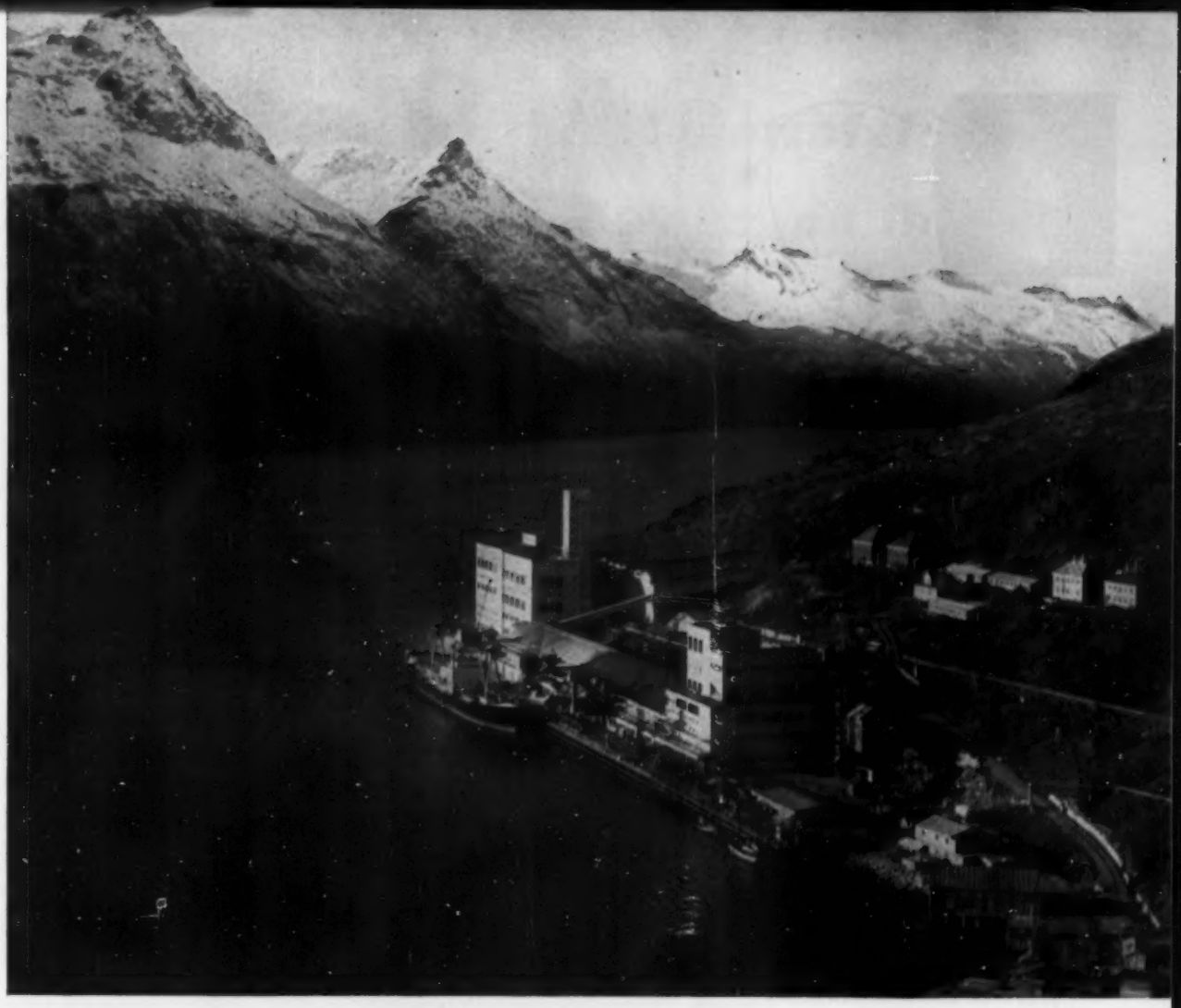
Special reports and tabulations, tailored to stated location requirements, will be prepared upon request by engineering and economics staff from central data, files and direct sources, covering:

LABOR—Availability, skills, rates, surplus areas.
MARKETS—Consumer, industrial-product, state, regional.
TRANSPORTATION—Water, rail, truck, air transit times, costs.
FINANCING—Community-state industrial building program, lease-purchase.
BUILDINGS—Availability, sizes, location, structural descriptions.
SITES—Acreage, topography, utility services; photos, maps; industrial districts.
MATERIALS—Metals, industrial chemicals, wood, textiles, farm products.
MINERALS—Location, reserves, potentials, analyses.
WATER—Quantitative, qualitative analyses.
POWER—Capacity, network, industrial service, costs.
FUEL—Coal, oil, natural gas service, costs.
ENGINEERING—Schools, enrollments, specialization, research laboratories.
TAXES—Inter-state and community comparisons, assessment ratios, millages, corporate.
COMMUNITIES—Characteristics, size, regions, housing, schools, culture, recreation.

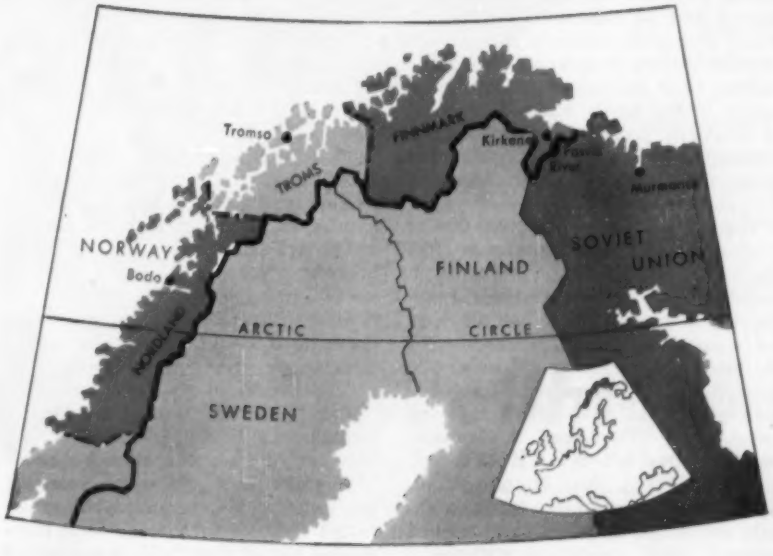
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Main Capitol Building
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Phone: CEdar 4-2912

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Filling a Forgotten Corner



INDUSTRY—in forms like the new nitrate plant above—is moving into Norway's beautiful but bleak northern provinces.

For centuries, the region (map) lived almost entirely from fishing, with patchwork farming on the side. Then, in 1952, came the ambitious North Norway Plan, blueprinted by Norway's paternalistic Labor Party government. In just four years the plan has prodded over 100 companies to settle in this remote land of fjords, tundra, and aurora borealis.

The unique development program is combatting chronic unemployment in the north, integrating the long neglected region more closely with the whole country. But Norway is not the only one taking interest in the program.

• **Stake for West**—NATO has a stake in northern Norway's future. Its radar-warning installations and air bases there are a stone's throw from strategic air



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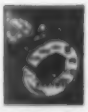
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TRADITIONAL LIFE: Norway tries to end poverty and seasonal unemployment in northlands by changing many of region's fishermen into eight-hour-a-day industrial workers.

routes and sea lanes—and from Russian territory. In Norway's last election, 16% of the northerners voted Communist. NATO will feel happier if the northern Norwegians, under the new program, improve their economic lot and thereby knit their political ties firmly with the Labor government.

Within the Scandinavian bloc, Norway's program is stirring up talk in two ways:

• The industrialization may give added impetus to the proposed Scandinavian customs union, similar to the Benelux common-market agreement. Norway, seeking protectionism for its weak economy, has obstinately rebuffed the proposal but if the country beefs up its industrial sector, the government may be more willing to reverse its stand.

• Both Sweden and Finland, following Norway's example, are taking a second look at their own northlands, which also are Communist strongholds. Sweden expects soon to set up a $20-million fund for financing small companies in the north. Finland, stripped of its Arctic ports by the Russians, is working on plans to ship out timber from the north through Norway's Finnmark province.

• **Forgotten Corner**—Some 400,000 of Norway's 3.4-million population (it's the smallest of the Scandinavian countries) live in the northlands. From the region comes about half of Norway's annual fish catch. Tromso—what the northerners call the "Paris of the North"—is a small typical fishing town, with its topsy-turvy life revolving around dark winters and the summer "midnight sun."

Before World War II, only Communist Party organizers, Arctic scientists, and occasional politicians bothered seriously with these northernmost provinces—Nordland, Troms, and Finnmark. Communists signed up the unemployed. Scientists studied geological formations, whaling techniques, and life among the reindeer Lapps. The politicians intermittently watched over the fishing interests.

• **Awakening**—The Nazis awakened the Norwegian government to its northern frontier. The German army evacuated to the south some 50,000 of the 67,000 people in Finnmark. Toward the war's end, the Germans' scorched-earth retreat from the Russians devastated much of the region.

But after the war, the rugged individualistic northerners returned to build new homes and revive their fishing industry. The government was forced to lay out some $200-million for reconstruction of whole towns. On top of this, the government developed a keener interest in the region because of the Communists' inroads there, its new responsibility as a NATO member, and its realization that the region above the Arctic Circle contained mineral and industrial resources.

• **Plan for Industry**—The 1952 government plan hopes to tap these resources, to eliminate much of the seasonal unemployment. It also puts the burden on private enterprise—something of a policy revolution for Norway's "welfare-state" government. (So extensive is Norway's socialistic planning that Danish and Swedish businessmen often refer to any stiff government controls as "Norwegian conditions.")

The North Norway Development Fund, headed by Reidar Carlsen, former Minister of Fisheries, provides about $58-million as a starter for financing new industry, but encourages companies to get most of their loans from commercial banks. Over half of the fund's

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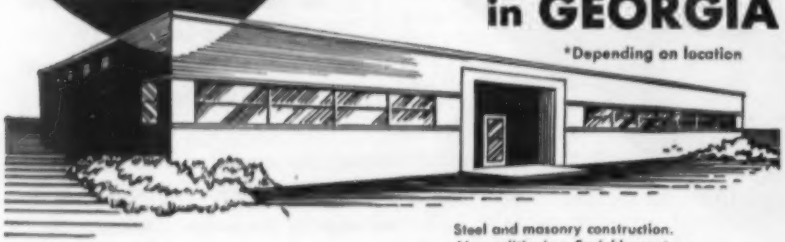
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". . . Finnmark will get a boost if the Russians agree to a proposed $40-million power development . . ."

STORY starts on p. 151

money is surplus from the State Unemployment Insurance Fund; another large chunk comes from freed Marshall Plan counterpart funds.

But the main gimmick to get companies to establish plants in the north is the government's tax concession plan. By allowing companies to set aside tax-free surpluses for building plants, the government so far has been able to stimulate $43-million of new private investment.

• **Results**—The program is no overnight job. But the government already can point to these results:

• Since last April, a $7-million aluminum plant has been under construction. An ammonia plant is laying out $10-million for expansion.

• In the new push for minerals, private companies—with some U.S. technical assistance—are mapping copper deposits in Finnmark, also eying nearby uranium deposits.

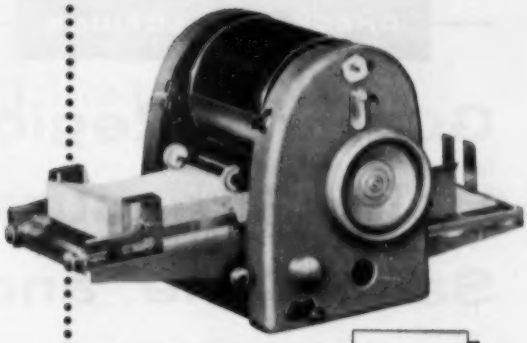
• A $100-million government investment in an old iron mine at Kirkenes (map, page 151) and new steelworks at Mo i Rana is beginning to pay off. Last year the iron mine shipped 1-million tons, earned nearly $10-million in foreign exchange. The steel mill, still test-running, will probably cover Norway's steel needs within a few years—and may produce enough for exports, too.

• Since 1952, 100-odd new plants—a ship motor factory, a garment factory, a metalworking plant, a woolen mill, a fish cannery, a cement factory among them—have opened in the region.

• **Barriers**—Before the program develops a real punch, Norway will have to solve two basic problems: poor communications and power shortages. Only 10% of Nordland's, 5% of Troms', and 2% of Finnmark's power sources have been tapped. Finnmark will get a boost if the Russians agree to a proposed $40-million power development along the Pasvik River, which is a common border between Russia and Norway.

The Nazis left behind some war-built airfields and roads, but cargo traffic moves faster by sea routes than by land. One bright sign is Scandinavian Airlines System's expansion of service to the north. A year from now, SAS hopes to have service as far as Kirkenes. And next February, its new Copenhagen-Tokyo polar flight will use Bodo as an intermediate stopping point. **END**







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If your company does business over a widespread area, you can save one or more days of check "float" time by discarding conventional collection methods in favor of Guaranty Trust Company's Regional Clearing Plan.

Here's how the plan would operate in the northeast area, for example:

- A lock box is rented to receive your remittances at the New York Post Office.
- Guaranty Trust Company representatives, at frequent intervals during the day, pick up customer remittances mailed to this box and credit receipts to your account.
- Checks are processed the same day for presentation by Guaranty's Transit Department, which selects the speediest means to insure quick availability of your funds.
- We mail to you an advice the same day, giving the details of remittances received necessary to reconciling your outstanding accounts receivable.

Variations of this procedure can be tailor-made to suit your own particular requirements.

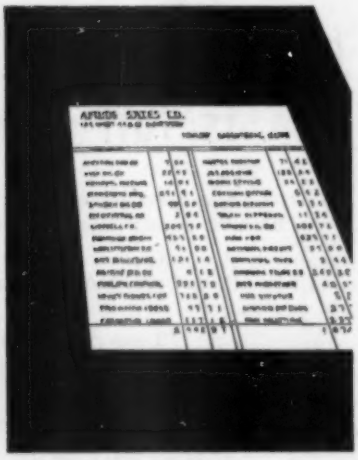
It is apparent how much time this collection system can save for your firm when you compare it to conventional methods involving from one to several days of float time.

This plan will help you effect considerable savings in clerical time and release office help for other assignments. Not the least of the benefits of the plan is that it gives you earlier knowledge of dishonored checks and weak credit situations.

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Commercial Banks Still Shifting Their Portfolios

		Loans* (In millions)	Government* Securities (In millions)	Deposits* (In millions)	Capital* and Surplus (In millions)	Ratio of Deposits* To Capital Funds	Ratio of Loans* To Capital Funds
Bankers Trust Co. (N.Y.)	1956	$1,484	$ 374	$2,282	$241	9½:1	6:1
	1955	1,430	438	2,287	236	9½:1	6:1
Chase Manhattan (N.Y.)	1956	3,555	1,189	6,493	524	12:1	7:1
	1955	3,231	1,233	6,354	522	12:1	6:1
Chemical Corn Exchange (N.Y.)	1956	1,460	438	2,627	223	12:1	6½:1
	1955	1,223	563	2,634	195	13½:1	6:1
Commerce Trust Co. (Kan. C.)	1956	181	96	437	35	12:1	5:1
	1955	184	106	427	33	13:1	5½:1
Continental Illinois (Chi)	1956	1,045	688	2,271	233	10:1	4½:1
	1955	796	961	2,219	221	10:1	3½:1
First National, Boston	1956	970	285	1,595	149	10½:1	6½:1
	1955	843	346	1,569	138	11:1	6:1
First National, Chicago	1956	1,467	633	2,469	225	11:1	6½:1
	1955	1,248	772	2,493	216	11½:1	6:1
First National City (N.Y.)	1956	3,578	1,127	6,226	566	11:1	6½:1
	1955	2,828	1,514	6,015	558	11:1	5:1
First Pennsylvania (Phil)	1956	516	159	941	85	11:1	6:1
	1955	478	172	965	75	13:1	6:1
Guaranty Trust Co. (N.Y.)	1956	1,490	551	2,391	413	6:1	3½:1
	1955	1,437	736	2,533	407	6:1	3½:1
Hanover Bank (N.Y.)	1956	904	241	1,646	150	11:1	6:1
	1955	749	439	1,516	154	10:1	5:1
Harris Trust & Savings (Chi)	1956	348	122	651	42	15:1	8:1
	1955	302	185	665	41	16:1	7:1
Irving Trust Co. (N.Y.)	1956	816	329	1,429	129	11:1	6½:1
	1955	723	319	1,389	127	11:1	6:1
Manufacturers Trust Co. (N.Y.)	1956	1,117	703	2,745	204	13½:1	5½:1
	1955	992	758	2,668	196	13½:1	5:1
J. P. Morgan & Co.	1956	381	173	734	77	9½:1	5:1
	1955	353	151	702	73	9½:1	5:1
National City, Cleveland	1956	294	169	660	49	13½:1	6:1
	1955	259	190	635	47	13½:1	5½:1
Philadelphia National	1956	439	118	847	85	10:1	5:1
	1955	377	165	831	80	10½:1	5:1
Republic National, Dallas	1956	414	83	665	75	9:1	5½:1
	1955	415	84	664	64	10½:1	6½:1

*All figures end of September—1956, 1955

Moving Still Deeper into Loans

As the nation's banks closed out their third quarter of 1956 business, they were preoccupied more than ever with trying to estimate the demand for money in the next few months. Through the first three-fourths of the year, commercial bank loans to business have expanded by $3-billion—half again as much as in 1955, which was itself no slouch for lending activity.

The loan demand has wrought some significant changes in bankers' habits. Many banks are currently lending out more of their deposits than they ever thought they would. Banks that liked to hew to a firm position of "no more than 50% of deposits in loans; the rest in cash, governments, and other securities" have found themselves lending out as much as 60% of their deposits. And up to now they've felt no ill effects.

• **Traditional Way**—The banks have managed this expansion of their loan portfolios in their time-honored manner—by selling their governments and other securities to get cash for more loans. Traditionally, they start by selling those governments on which they'll have to take little or no loss through price

This announcement is neither an offer to sell nor a solicitation of an offer to buy any of these Shares. The offer is made only by the Prospectus.

648,696 Shares

Johns-Manville Corporation

Common Stock

($5 Par Value)

Rights, evidenced by subscription warrants, to subscribe for these shares have been issued by the Corporation to the holders of its Common Stock, which rights will expire at 3:30 P.M., Eastern Daylight Saving Time on October 17, 1956, as more fully set forth in the Prospectus.

Subscription Price $40 a Share

The several Underwriters may offer shares of Common Stock at prices not less than the Subscription Price set forth above (less, in the case of sales to dealers, the concession allowed to dealers) and not more than either the last sale or current offering price on the New York Stock Exchange, whichever is greater, plus an amount equal to the applicable New York Stock Exchange Commission.

Copies of the Prospectus may be obtained from only such of the undersigned as may legally offer these Shares in compliance with the securities laws of the respective States.

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October 2, 1956.

depreciation. But, as loan demand continues and tight money policies push down the prices of governments, the banks begin losing more when they sell their governments. Interest rates have to move higher, become more attractive, if banks are to keep expanding their loan funds through such sales.

• **Gone Far Enough**—Looking at the table on page 157, you can see how this expansion in bank loans and the coincident erosion of government portfolios has been going on in a representative group of banks. The problem now is that many banks believe they have pared back their holdings of governments as far as they should, or that further losses in sales of governments would be unwarranted even with interest rates at a 30-year high.

Banks have to face another problem in shifting increasing chunks of funds into loans. Traditionally, bankers regard loans as "risk assets;" cash and governments, being most liquid, are relatively "riskless." With 60% or so of their assets already in the risk category, many bankers are shying away from further loan expansion until they can enlarge their lending base.

• **Chase's Move**—This feeling was undoubtedly one reason behind last week's announcement by Chase Manhattan Bank, the nation's second largest, that it plans to sell 1-million shares of capital stock. The sale would probably bring around $50-million to the Chase; of this, the Chase would probably put $12.5-million into capital; the rest into surplus. Thus the Chase would have the highest capital and surplus in the country—just a shade above the nation's biggest, Bank of America N. T. & S. A. It could also lend more to a single customer than could any other New York bank; for New York banks' single loans are limited to 10% of capital and surplus.

• **Gotham's Problem**—Money problems in New York City, where most of the nation's largest banks are concentrated, have been accentuated by another phenomenon—that of diminishing deposits. Four of New York's biggest banks show deposits lower at the end of September this year than at the end of last year's third quarter. There have been no particularly loud cries of money squeeze, however, as percentage losses have stayed small.

Money always tends to drift out of New York in times of high business activity because corporations borrow heavily in the money market and use the cash to meet payrolls and materials costs in the areas where they actually operate. In the present market, this situation is complicated by another factor: With interest rates so high, a corporation with a temporary surplus of cash is likely to take it out of the

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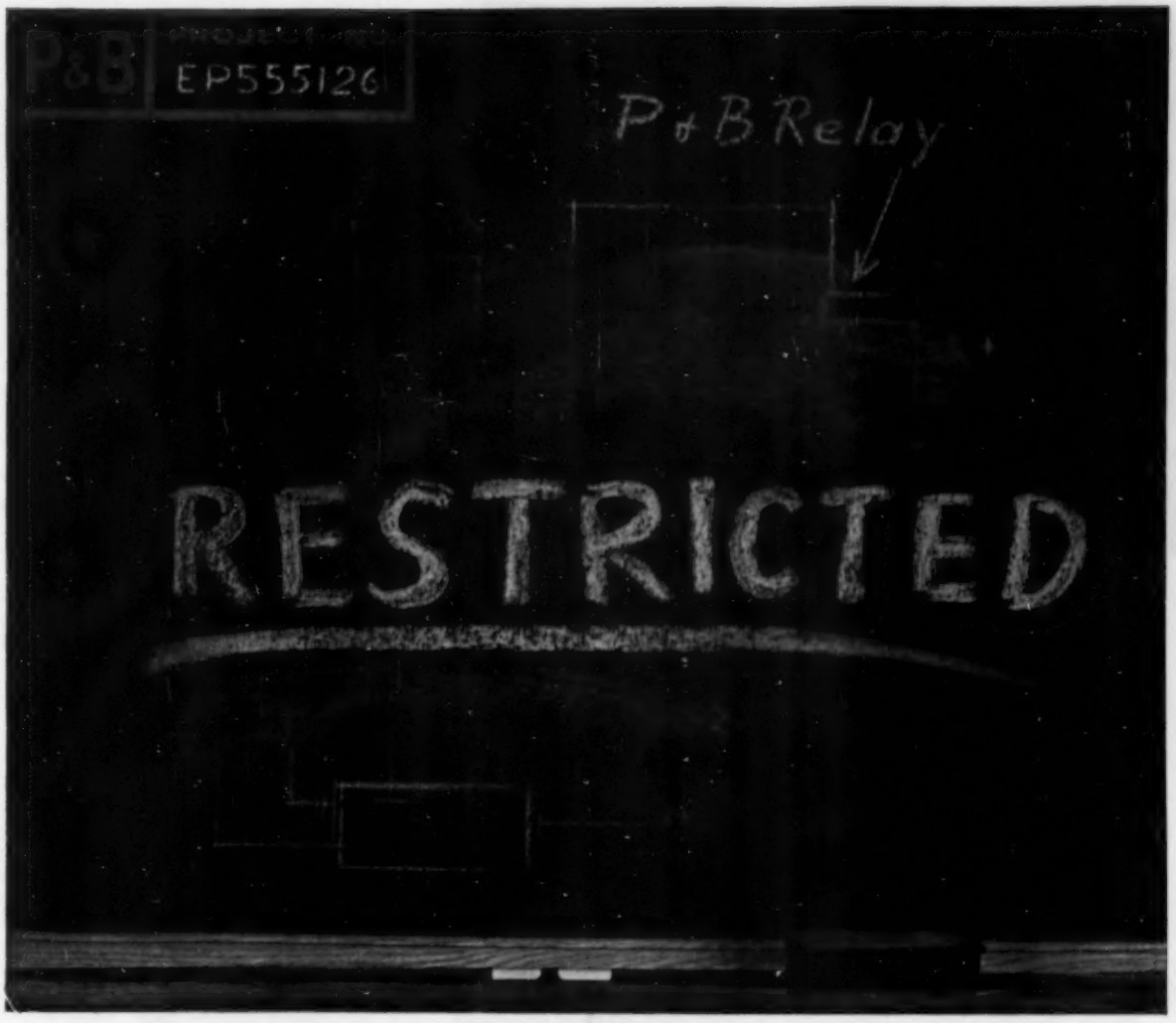
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banks and put it to work in the government bill market.

Like bankers throughout the country, the New York banks have been requiring customers to keep at least 20% of their loans on deposit with the bank and have been pressing the Federal Reserve Bank to make reserve requirements uniform, presumably at 20%, or just below. Currently they've fixed at 22% for New York and Chicago banks, less for banks in smaller cities.

But there's no doubt that New York bankers are feeling the squeeze, and will have to do some scrambling to keep up with what promises to be a record lending spree in the fourth quarter. The Chase, assuming its stock sale goes through with no snags, will improve its position. But it's not yet known how many other New York banks might follow the Chase's lead and pump up their capital positions by tapping stockholders.

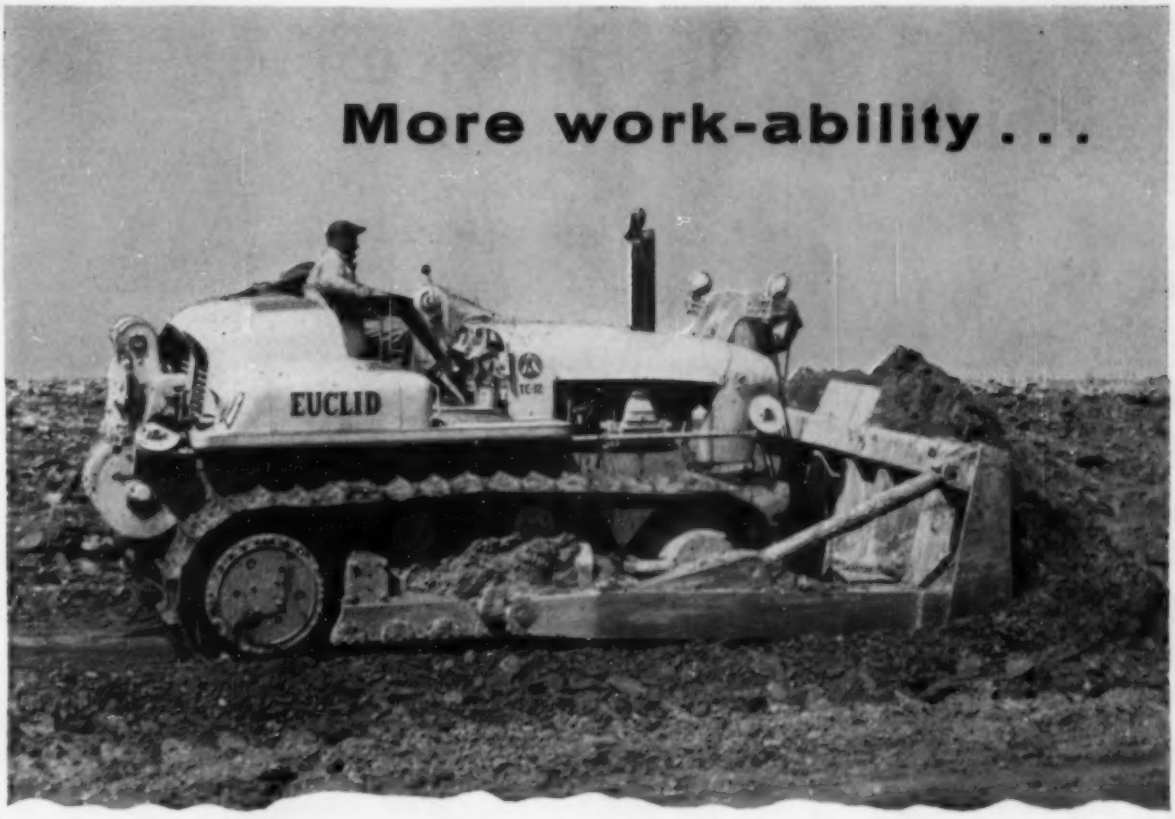
• **Seeking Extras**—Traditionally conservative in their dividend policies, bankers have been able to siphon a few dollars into surplus due to their fine earnings over the past nine months. Though securities losses pare back the 10% to 30% increases showing up in net operating earnings, net profits generally are higher than they were a year ago, and dividends have changed little, if at all.

Another thought that some banks are toying with in an effort to bolster their liquid positions is to sell real estate, then lease it back. The idea here is to unlock fixed investment in property and use the money represented in it now, when both demand for money and lending rates are high. Banks would also gain some tax savings under lease-back deals. But they're moving cautiously on this until state regulatory authorities pass on the wisdom of lease-backs.

Small Business Loans Rising, Survey Finds

In a touch-and-go political campaign, the question of how hard tight money has hit small business crops up increasingly. Now, without specifically aiming at the political arena, the American Bankers Assn. has an answer.

A special committee of the ABA surveyed small business lending by 78 large banks throughout the country from August, 1955, to August, 1956. In that period, the committee found that the dollar value of loans under $100,000 had increased by 14%, compared with the 12% expansion of all loans for Federal Reserve member banks (page 157). The actual number of loans under $100,000 was up 5%. END



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In Finance

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SEC's Punch at "Boiler Room" Operators Would Tighten Registration Rules

Corporate mergers, consolidations, and securities reclassifications will come under the cold eye of the Securities & Exchange Commission if SEC writes into its regulations a new rule that it's now considering.

It would mean that corporations would have to furnish their stockholders with as much information as would be required for a normal registration for sales of securities before getting their vote on any of these other transactions.

The question before SEC is whether to revise Rule 133 of the Securities Act of 1933—a rule that exempts from registration the issuance of securities for mergers, transfers of assets, or consolidations. **These transactions have been exempted from registration because, in theory, they involved no sale of securities. In practice, it hasn't quite worked out this way.** In fact, the proposed revision stems largely from an SEC investigation that discovered that:

• Some dealers and brokers have been selling customers nearly worthless stock at inflated prices, often after first persuading the customers to sell good-grade securities.

• Much of the inventory for these operations has come, according to SEC, from companies that have used the no-sale exemption to issue stock under the guise of using it for a transfer of assets or a consolidation.

Says SEC: "The company can issue new stock without registration, get a broker to sell it at inflated prices—and we'll hear nothing about it unless the purchaser files a complaint." Some customers have lost as much as $150,000 in these deals, says SEC.

SEC guesses that closing off the no-sale exemption provided by Rule 133 will be just one step toward breaking up "boiler room operations." It hopes to put extra heat on these operators by stepping up its investigations, now centered in New York City.

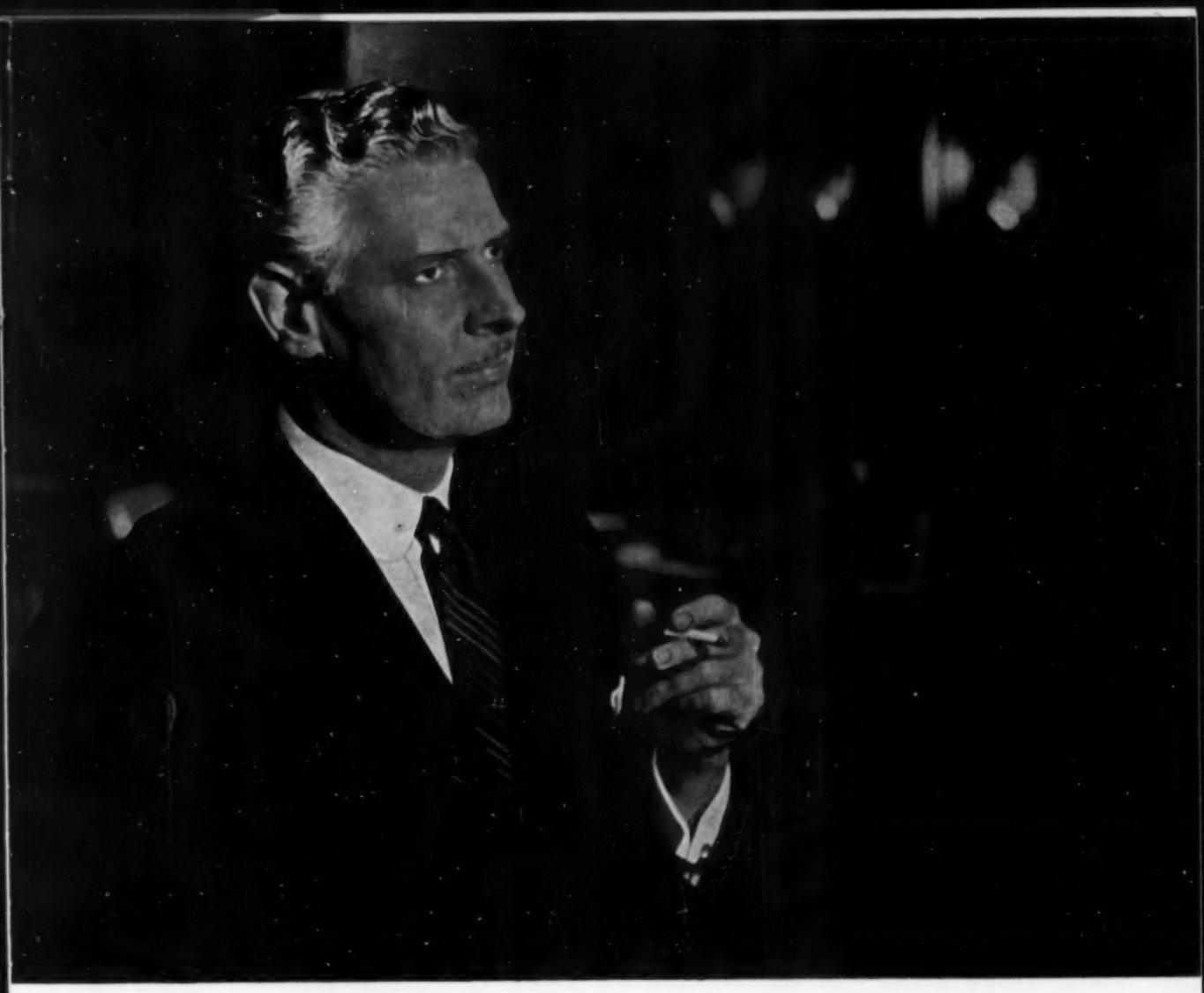
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New York's Banking Chief Sets Guidelines for Bank Mergers

The bank merger movement in New York State was slowed last week when State Supt. of Banking, George A. Mooney, turned down the proposed merger of two Buffalo banks, Manufacturers & Traders Trust Co. and Liberty Bank of Buffalo.

Mooney opposed the merger on the grounds that it would put 98% of all Buffalo's commercial bank assets in just two institutions—the merged bank, and Marine Trust Co. of Western N. Y. "So great an asset concentration in so large a city would have been utterly without precedent," Mooney said.

He firmly laid out his criteria for future bank marriages: "I cannot establish a precedent which would eliminate asset concentration as a factor in supervisory consideration of mergers, and also invite drastic legislation which might adversely affect sound bank mergers in the future. . . . Approval would have served notice that asset concentration is no longer within the orbit of Banking Dept. merger policy."



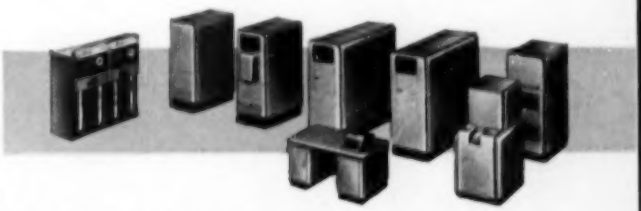
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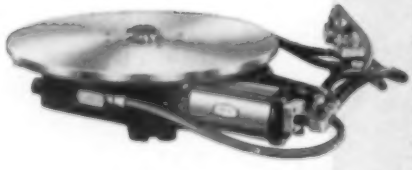
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INTERNATIONAL OUTLOOK



At the United Nations this week the Western powers are making their second try at direct negotiations with Egypt over Suez. Pres. Nasser stymied the first try when he refused to negotiate with the Menzies mission.

It's far from certain that anything will come from the new effort. At best, it's likely to be a long-drawn-out affair. But the chances of an ultimate settlement seem better than at any time since Nasser seized the canal.

The Western try is being made outside the Security Council, in private talks between the British and French foreign ministers on the one hand and the Egyptian foreign minister on the other.

Two developments cleared the way for these talks:

- Hints from the Egyptians that they are ready to talk business.
- London's decision to settle for international supervision, with automatic guarantees, instead of international operation of the canal.

The British position, which is backed by the French, differs little from the one that Secy. of State Dulles has wanted the West to take.

It's clearly a retreat from the original British stand. But it doesn't give way on the Western demand that the operation of Suez, to use Dulles' words, "should be insulated from the politics of any nation."

To achieve this goal under a system of international supervision, the British are insisting on a setup that would give the canal users:

- Veto power over what Egypt can charge for canal tolls.
- The right, under international law, to impose sanctions if the Egyptian government infringes on freedom of traffic through the canal.

Until agreement is reached on these fundamentals you can ignore reports about Western-financed projects for a vast expansion of the Suez waterway.

The Egyptian Canal Authority has been trying—without any success—to draw U. S. oil and shipping companies into investing in the canal. There have also been rumors that the Suez crisis might be resolved, much as the Iranian oil crisis eventually was, by the intervention of a Western oil-shipping consortium.

But Nasser would have to play a different tune, and play it for quite a while, before any of the big oil companies will look twice at such schemes.

—•—

There is still little hard information on the Yalta talks between the Soviet leaders and Pres. Tito of Yugoslavia (BW—Oct.6'56,p30). Enough has leaked out, though, to indicate that some real horsetrading went on. The available evidence suggests a deal like this:

- **Yugoslavia is to play the leading role in the Communist-controlled Balkan countries.** Albania will become a Yugoslav, rather than a Soviet, satellite, thus returning to the status it had before Tito's break with Stalin. Control in Bulgaria is to be shared between Belgrade and Moscow.
- Tito has agreed to live with the present governments of Hungary and Romania, even though they are led by Stalinites who once opposed him.
- **Tito is to keep his hands off Czech and Polish affairs.** Apparently the Yugoslav dictator has been convinced that the ferment in Poland has reached a point where it could boomerang against the whole de-Stalinization process.

The Polish drama is moving toward a climax.

The Posnan trials, unprecedented in Bolshevik history, have turned out to be a popular victory over Communism. Stalinites are being turned out of the government one by one. From all reports, labor discipline is steadily breaking down.

If Moscow lets this process go on, the Soviet position in neighboring East Germany and Czechoslovakia could easily be undermined. But the Kremlin can't return to Stalin's oppression without upsetting the apple cart at home and abroad.

If anything, this is a hotter potato for Moscow to handle than Suez is for the West.

—•—

France's troubles in Africa (page 144) may be spilling over into the neighboring Belgian Congo—until now, Africa's "model colony."

Colonial administrators in Brussels have been preparing a plan for a 30-year transition of the Congo to self government under the Belgium crown. **But there's growing native resistance to the proposal,** as formulated by members of Belgium's Liberal Party. The Congolese don't want their freedom tied to a proposal for union with Belgium. And they are demanding "equal pay for equal work" now.

Meanwhile, Belgian Socialists are jockeying in the Socialist-Liberal coalition government to get control of Congo policy. Socialist planning calls for nationalization of the huge Congo mining companies, in which the government has only a minority interest today.

—•—

There's real momentum behind the movement for European unity (page 25). But it could be lost if the six members of the Coal and Steel Community can't agree on Euratom and the Common Market—the proposed schemes for a nuclear energy pool and a customs union.

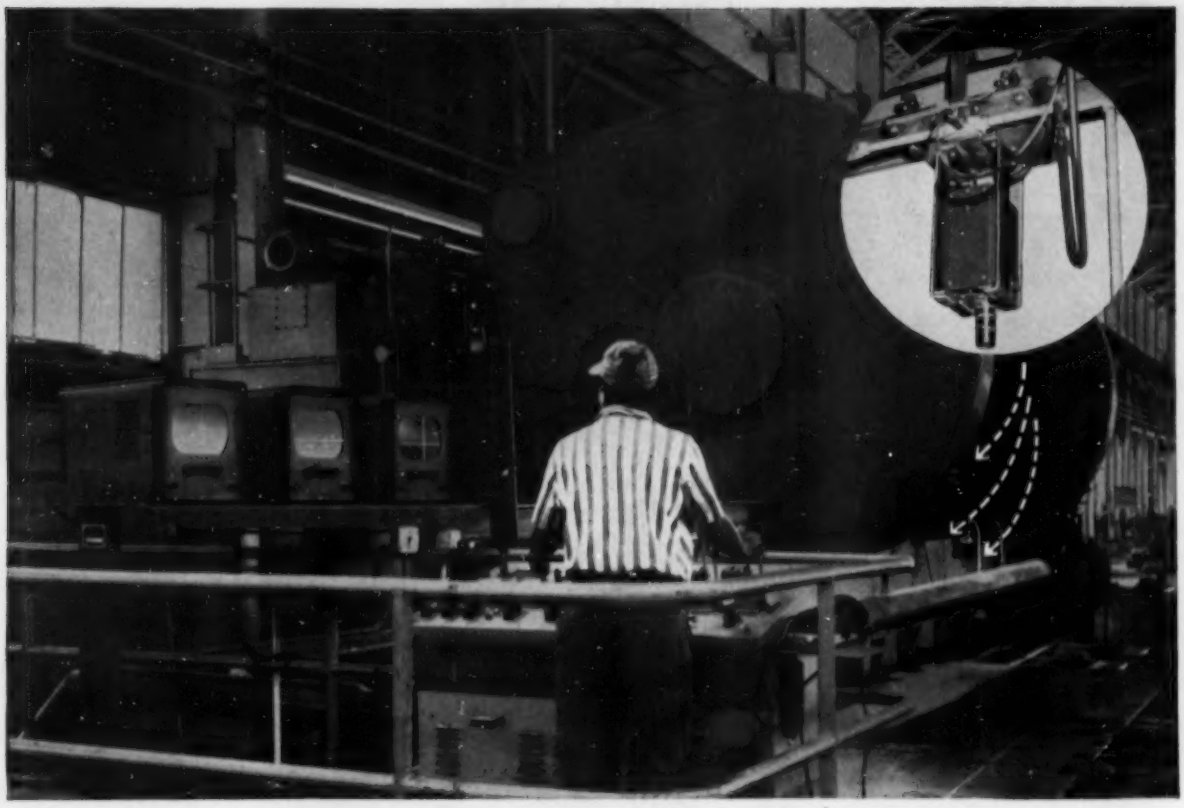
Failure on the Common Market would be especially important. That would take the pressure off Britain, where there's growing support for tying the British economy into the Continental free trade setup.

The foreign ministers of "The Six" are due to meet next week to see if they can get enough agreement on the two schemes to start the treaty-drafting process. (The U. N. debate on Suez forced a postponement from this week.)

On Euratom, the big problem is West Germany. The Germans are keen enough about some kind of six-nation cooperation in the nuclear field. But they are dragging their heels on one of the central features of the scheme—having the central agency make all purchases of fissionable materials for the six nations.

On the Common Market, France is the problem. The French government will insist that its domestic price level is so high today that it will have to retain its present tariffs and export subsidies even if it joins the Common Market. **Devaluation of the franc, which is long overdue, could largely solve that problem. But this isn't politically feasible.** So the other nations will have to give France very special treatment to get the Common Market under way. And that may not go down well in the others.

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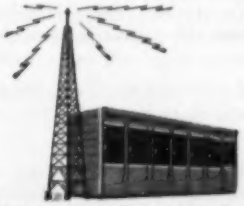


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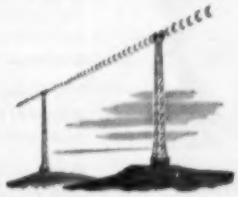
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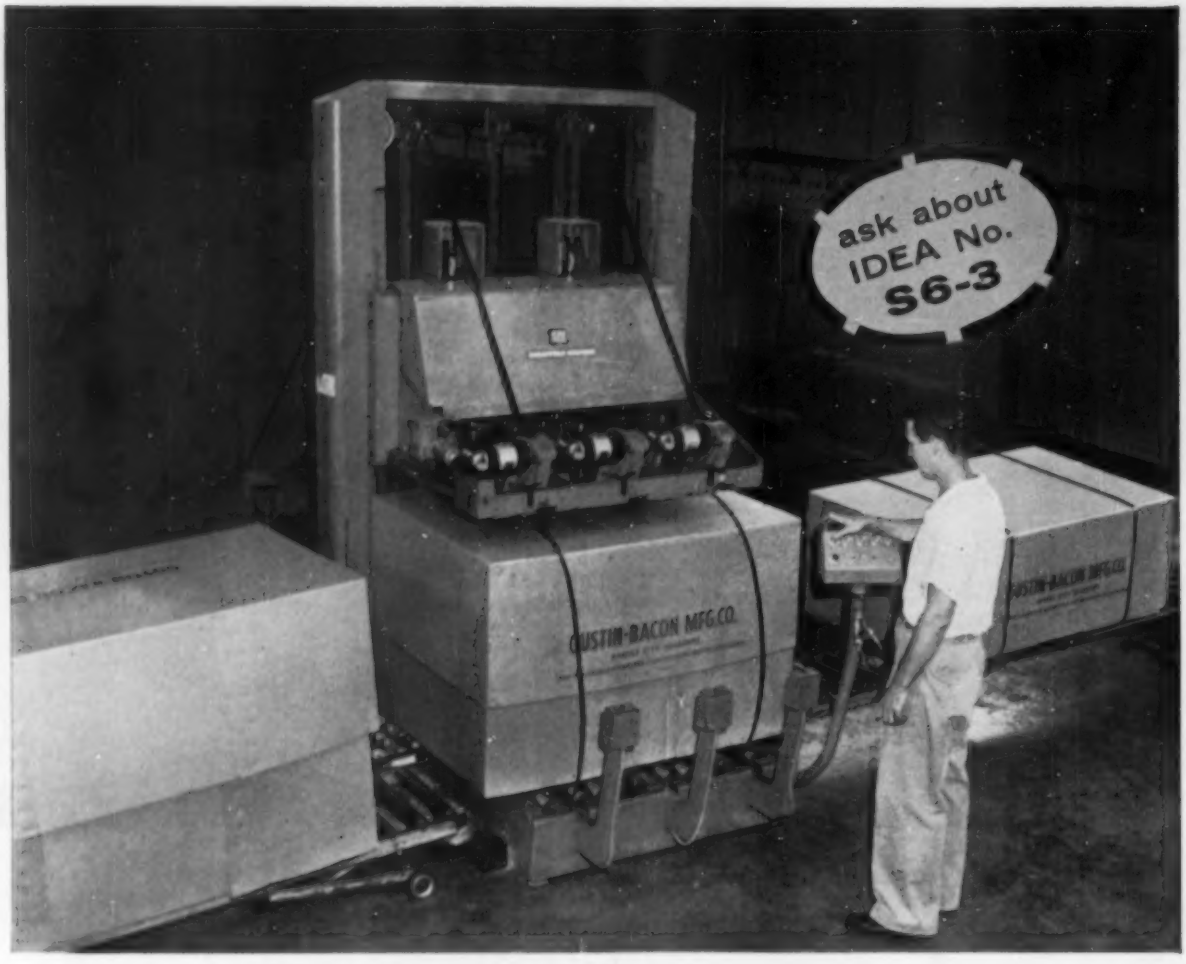


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ACME STEEL **STEEL STRAPPING**

In Washington

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IRS Gives the Bad News on Taxes To the Nation's Heavy Truckers

The nation's heavy truckers have got their ration of bad news for the week: The Internal Revenue Service has published its proposed schedule of new taxes on their operations. These taxes are the federal levy that Congress placed on trucks to make them help pay part of the cost of the 13-year, federally aided, highway building program.

IRS's proposal is that trucks having loaded weights of 26,000 lb. and more be taxed $1.50 a year for each 1,000 lb. of weight. The tax will be based on a combination of the truck's unloaded weight and its carrying capacity, rather than on the actual weight of each load it carries during the year. For example, a two-axle truck and tractor with an unloaded weight of 9,000 lb. will be billed for taxes on the basis of its loaded weight of 50,000 lb., and in this case the tax would be $75 a year.

IRS will hear protests against its proposal until Oct. 17. If the proposal isn't changed, the tax will be due on Nov. 30. Thereafter, IRS plans to collect on July 1.

Some heavy truckers are protesting, particularly those who move new autos and household goods. They use relatively large trucks, but haul relatively light loads, and their trucks aren't loaded at all during much of their highway running time.

• • •

Government May Soon Match Industry's Bids for Engineers

Industry may have to compete dollar-for-dollar with the government in hiring engineers next year.

Foundation for that prediction is that the Budget Bureau, with White House backing, is preparing legislation that would enable federal agencies to pay competitive wages to get the engineers they need.

The White House, Congress, and the budget people have been paying increasing attention to complaints of leading federal administrators that their agencies are losing their best engineers and are unable to hire and keep just-graduated engineers because federal pay scales don't match industry's.

Among the agencies that will be paying more for engineers once the legislation is drafted and passed are: the Bureau of Public Roads, the Bureau of Standards, and the military.

• • •

Big Federal Highway Program Will Get Thorough Probing

No matter who wins control of the House and the Senate, a complete investigation of the status of the new federal highway building program is likely to get going in Congress early next year.

Key congressmen of both parties feel there's no clear picture yet as to (1) how the states are coming along with their plans for new federally aided highways, or (2) whether there'll be steel, cement, equipment, and manpower enough to get the job going on schedule. Already, Rep. George H. Fallon (D-Md.) who is chairman of the roads subcommittee of the House Public Works Committee, has promised the committee will begin working on questions like these as soon as Congress opens its new session in January.

Fallon and other congressmen feel it's necessary for them to take a thorough look at the real impact of the 13-year, multibillion-dollar highway program they approved last year.

• • •

Lease-Purchase Buildings' Program Runs Into Financial Shoals

The government's big lease-purchase program for acquiring new federal buildings has run into trouble, on financing. Officials think it's only a temporary setback for the long-range program, which already envisions at least 99 projects worth nearly $700-million.

Immediately involved are two projects—a $12.3-million communicable disease center in Atlanta, and a $1.6-million office building in Council Bluffs, Iowa—for which **financing offers carried conditions that General Services Administration says are unacceptable. Moreover, GSA officials say that only one financing tender was received for each project.**

Disappointed, but not disheartened, GSA officials are now going ahead—inviting bids Nov. 15 on another project and scheduling five others.

They believe that bankers and fund managers will make plenty of financing offers, once the program is better understood. Their selling points: The government assumes all the risks of building ownership; private investors are asked merely to bid on the interest rate they will charge—up to a top of 4%—for construction funds that the government pledges to pay back like rent over a 25-year term. They will stress that the investment is as safe as government bonds, and will earn a higher return.

• • •

Labor Dept. Weighs Impact Of New Minimum-Wage Scale

How much has the new $1 minimum wage hurt industry? Labor Dept. officials are coming up with a preview of the economic impact of the first eight months of the higher pay base.

Pres. Eisenhower tipped the upcoming report at a press conference, where he repeated the Administration's position on first broadening coverage rather than supporting union leaders' demands for another hike to $1.25 an hour. Details of the $1 survey aren't expected to alter either stand.

Biggest effects are anticipated in the South—particularly in the sawmilling and fertilizer industries. The last minimum wage increase, from 40¢ to 75¢ in 1950 caused some business failures and payroll cutbacks. The impact this time is expected to be "50% greater," according to Labor Dept. officials.



Photos courtesy Manger Hotels, New York, N. Y.

"These filters pay for themselves in two years —the rest is clean profit"



—REPORTS LEADING HOTEL CHAIN

To maintain its high standard of cleanliness this hotel chain was replacing throwaway filters in room air-conditioning units on the average of once a month. Next, they went to a permanent-type, oiled filter—but cleaning cost was excessive. Then they tried PLIOTRON—the world's first truly washable electrostatic air cleaner.

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PLIOTRON is the super-efficient air cleaner. Its special filter medium actually attracts and captures up to five times as many fine dirt particles as ordinary media. Yet PLIOTRON takes longer to become dirty, because it depth-loads rather than surface-loads. And PLIOTRON can be expected to last indefinitely, because, when dirty, a quick bath restores its full efficiency.

PLIOTRON is available in standard panels to fit any air distribution system using ordinary filters, and in a new heavy-duty construction for extreme service conditions. It also comes in new half-inch thick panels for use in window air conditioners. For full details on how *you* can get clean air at less cost, see your PLIOTRON distributor or write: Goodyear, P.O. Box 288, Akron, Ohio.

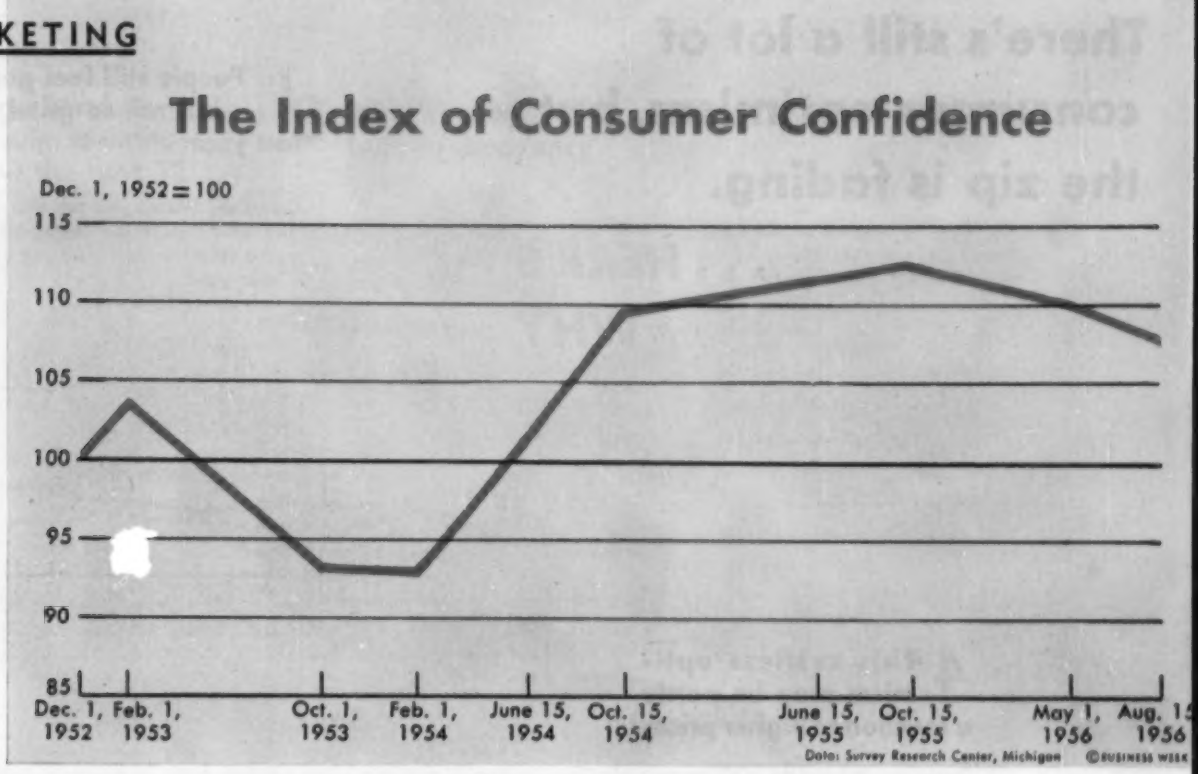


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No Bounce in the Buying

THIS IS WHAT STANDS OUT in the latest survey of consumer attitudes as measured by the University of Michigan's Survey Research Center:

• For the second time this year, the over-all index of consumer confidence has slipped a notch (chart).

• Despite this, the buying public remains in a substratosphere of optimism that has marked its attitude ever since the major turnaround in June, 1954.

• But there is no mistaking a current zestlessness—a lack of what Survey Center analysts call "new incentives" for buying. This first showed up after the splurge of renewed confidence began petering out in early 1955.

• **Blue Sky**—Regardless of the direction of the curve, it is far from a depressing picture.

For one thing, you shouldn't read too much into what appears to be a downward trend. Statistically, the change in attitudes measured by interviews with some 1,500 consumers in all parts of the country in April-May and again in August is not great enough to be sharply significant. Only when a shift occurs of the size that took place between January and June, 1954, can you safely consider the consumer index is flagging a major change in consumer behavior. At that time, there was an unmistakable sweep of optimism that correctly signaled the end of the 1953-54 recession.

On top of that, the current survey was made during August—the first time the Survey Center has picked that particular time of year for one of its privately financed interim series of surveys that supplement the annual Survey of Consumer Finances for the Federal Reserve Board (BW—Mar.17'56,p32). Researchers chose August primarily because they wanted to measure pre-election sentiment, then in November take another reading before the annual FRB measurement in January.

• **According to Pattern**—Actually, what has happened this year to consumer attitudes is fairly close to what might have been expected. For months now, the Federal Reserve Board had encouraged a tightness in the money supply, designed to forestall any tendency toward runaway inflation.

Whether or not this has had anything to do with consumer attitudes, the Survey Center thinks it is significant that consumers clearly indicate they are conscious of a slight economic dip. This is in the face of high employment, pay increases, and a continuing high level of consumer spending. Even though he realizes that the economy has slowed up, the consumer apparently is not in a mood to be overly concerned about the future.

As the report by the Survey Center put it: "The disparity between people's judgment of the past and their firm confidence in the future testifies to the strong undertone of optimism which prevails today among large groups of the American people."

• **Caution**—But there's no question that his exuberance has been pinched, so that economically the country may not be able to bank heavily on unrestrained consumer demand.

It's just this lack of spark that causes the Survey Center to raise this cautionary note:

". . . the picture of consumer attitudes offered by the August survey is not entirely bright."

This is true for three principal reasons:

• The pluses aren't strong enough to outweigh the minuses. Intentions to buy new cars, for instance, aren't nearly so bullish as you might have expected them to be.

• Consumers expect prices to go up moderately—and, in the eyes of the Survey Center, that is a negative sign.

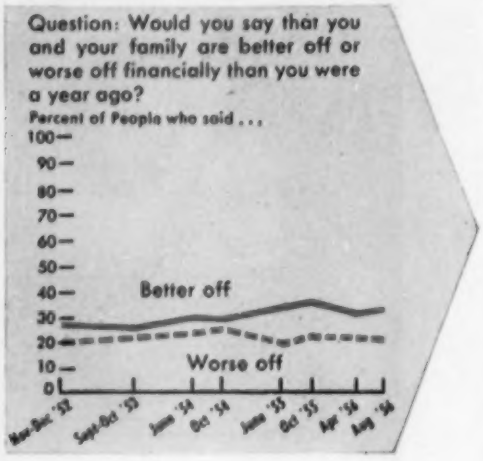
• The outlook for residential housing is anything but encouraging.

But the present condition of consumer attitudes in general—a sort of statistical plateau—raises a lot of questions. For a more detailed analysis, turn the page.

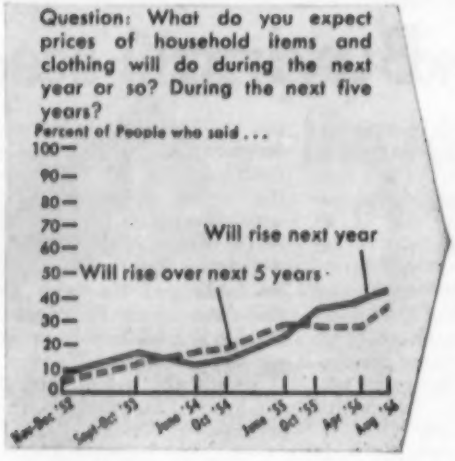
There's still a lot of consumer optimism, but the zip is fading.

. . . HERE'S WHY

1 People still feel good —but not so good as last year



4 This zestless optimism may be partly a reaction to higher prices



BUT, overall, consumers have lots of confidence in the economy as a whole

(Story starts on page 171)

The Three Question Marks: Autos, Housing, and Prices

THE CURRENT SURVEY of consumer attitudes released this week by the Survey Research Center in Ann Arbor, Mich., raises questions in three important economic areas: (1) automobile demand; (2) housing; and (3) prices.

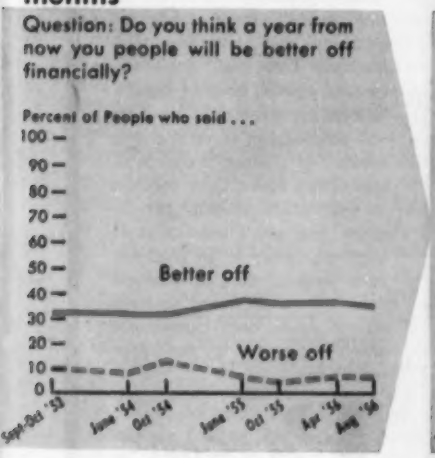
It's these three added together that have helped supply the modicum of pessimism that the Survey Center finds (page 171):

". . . we must conclude that the survey offers no evidence of growing strength in those consumer markets that have not fully shared in the recent prosperity, notably residential construction and sales of durable goods."

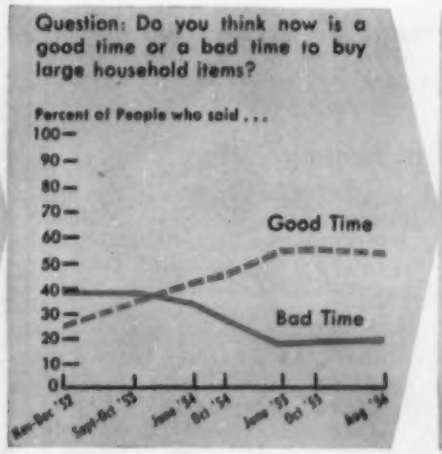
1. Auto Outlook

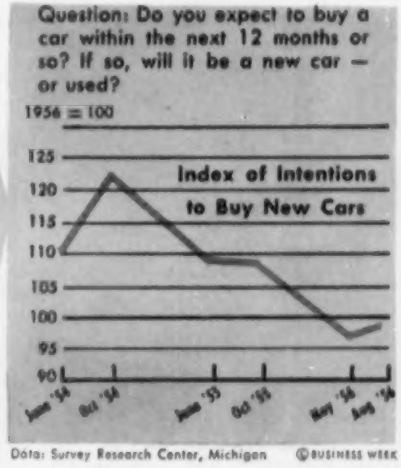
Detroit expects next year to be the year when the auto industry once again gets back on the highroad (BW–Oct. 6'56,p23)–with some estimates of total sales as high as 7-million (domestic and export). But consumer intentions to buy new cars, no matter how you look at it, are disappointing (chart). True, there has been an upswing in the Survey Center's yardstick since the April-May survey, but statistically it is so small it doesn't clearly signify a shift into a new surge of buying demand.

2 Looking ahead, they aren't quite so enthusiastic about the next 12 months

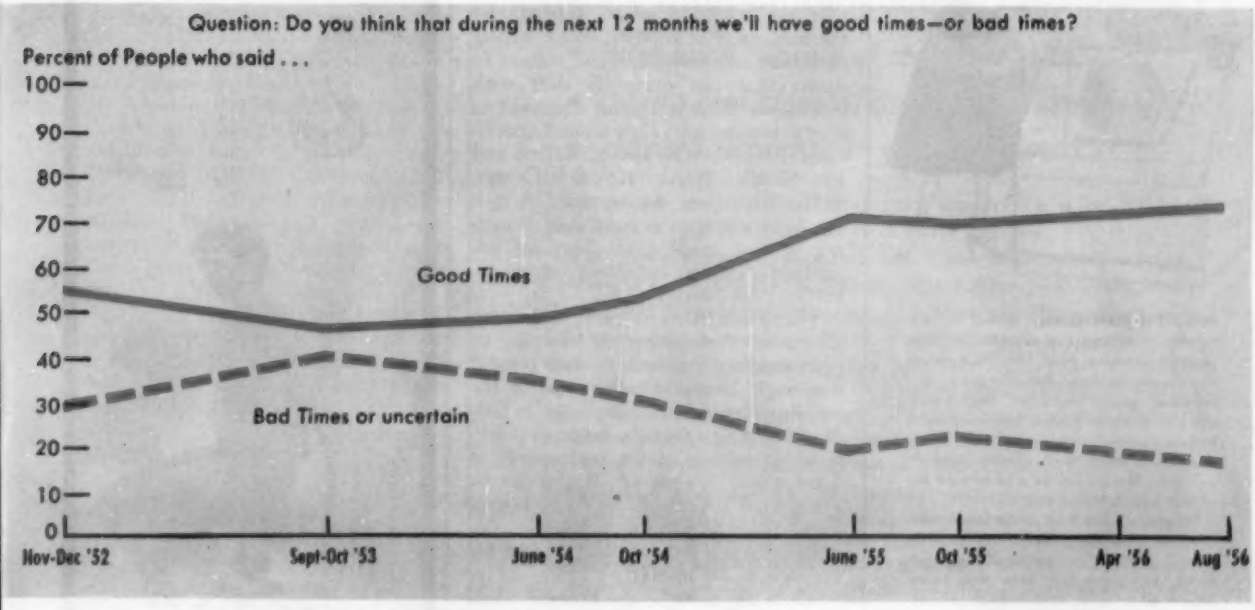


3 What's more, their buying intentions have no built-in buoyancy





Data: Survey Research Center, Michigan ©BUSINESS WEEK



What little increase there is came at a time when you would expect such a seasonal shift—so that you have to discount the importance of the change for that reason, too.

This minor upswing leaves the new car index still far below October, 1954, and substantially lower than last fall. There are a couple of other depressing factors, too. If you look at the chart above you see a sharp rise in intentions to buy new cars between June 15 and Oct. 15, 1954. This was an early indicator of the record-breaking 1955 auto market. In 1955, there was no such rise—and 1956 proved less than sensational for the automobile industry. This year, the spring-to-fall change is slightly up—but not enough to get excited about.

On the other side of the ledger, there is the fact that the survey was made before introduction of new models (but so was the 1954 survey). It can very well be that consumers will change their minds when they see the 1957 cars. This may be somewhat more likely this year than last since (1) the model changes are much greater, and (2) the survey found an increase in those planning to buy used cars and in those who are undecided. Thus, Detroit —if its 1957 models catch the con-



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". . . many more people are planning repairs and improvements to their present dwellings . . ."

STORY starts on p. 171

sumers' eyes—may swing these customers into the new car market. Next month's survey may be able to catch any such development.

II. Housing

Equally important is the housing situation. Here, the Survey Center found no question about the direction the trend has taken—"a sharp drop in house purchase plans has occurred since April."

This economic area, coupled with the less-than-bullish automobile outlook, is another factor that helped hold down the level of confidence.

Even though the housing data collected for the survey are pessimistic, there are two things to watch for:

First, the Survey Center itself is not so confident of its figures on housing as it is in other areas. For one thing, the sample of prospective buyers is so small that any statistical error could distort the findings. For another, house buying intentions are probably more subject to delays that can obviously shift with conditions. This is a point discussed in a new monograph, Consumer Expectations, 1953-1956, by George Katona and Eva Mueller (Survey Research Center, 1956). Right now, for example, there is the tight mortgage market. Any loosening of that could easily have an immediate effect on consumer buying intentions for houses.

Then, too, there is every indication that many more people are planning repairs and improvements to their present dwellings. This could help sustain the building materials industry—and, in fact, might be a sign that the home improvement promotion of the past couple of years is ready to pay off. It also can be interpreted as pressure for larger houses to take care of growing families—a condition that has some encouragement for the new house market.

All in all, though, the housing situation adds up to a pretty important minus in the current survey.

III. Prices

This, to some extent, is also true of consumer expectations that prices during the next 12 months will increase slightly.

But this year a big question mark has risen in the minds of the surveyors about consumer resistance to price in-

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WRITE ON YOUR BUSINESS LETTERHEAD FOR BOOKLET 181, "HOW TO GET WHAT YOU NEED IN RECORD-KEEPING PAPERS AND INDEX CARDS." PARSONS PAPER CO., HOLYOKE, MASS. © PPCO 1956

creases. The coming year could very well help them determine just how much influence expected price increases have on the will-to-buy.

As recently as 1954, the situation on prices as an influence on buying intentions worked this way: Over the long pull, most people felt that prices would remain the same or be lower. Far fewer thought they would go up. So, when short-term price expectations showed consumers betting on a mild increase, the Survey Center counted on this as a depressing factor—since people presumably could delay purchases in anticipation of better buys later (any marked expectation of sharp increases are set down as encouraging buying intentions).

Today, the situation has changed. Ever since 1955, there has been a steady increase in the number of people who think prices for the next five years, at least, will increase moderately. The August count in this five-year look ahead was at an all-time high. At the same time, the percentage who looked for moderately higher prices next year also was at an all-time high, substantially above the figure earlier in 1956.

The question is: Does this portend a fundamental shift in consumer price resistance? In other words, if consumers today are more prone to expect a long-term increase in the price level, will they be more inclined than before to go ahead and buy now, despite expected short-term boosts?

It is a question that has added importance right now, in view of the unmistakable upsweep in prices generally (BW—Sep.1'56,p25). Consumers, the survey found, are much more inflation-conscious than in past surveys—the question of price kept popping up even when the question wasn't directly raised.

Partly because of this and partly because of past experience with reaction to price boosts, the Survey Center weighs the expected price increases on the low side of the scale.

IV. The Economy

Once you've added these unfavorable factors together, you still come out with a picture of the consumer as one who is remarkably sure that we won't have bad times, either in the next 12 months or in the next five years.

Financially, they feel no worse off than they did a year ago—and expect to be equally well off next year. This is hardly startling, considering the general level of the economy. But it is perhaps more bullish than it looks, since the survey participants weren't ignorant of the fact that 1956 hadn't been a record year. It leaves the consumer a strong support in the economy—but one who has to be wooed. END

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The Hard Sell Comes to the



OPENING of a new branch at Paramus, N. J., reflects the optimism Stephen Masters, president of Masters, Inc., feels for the future of the discount house.

Early this week, the quietly triumphant young man (left) stirred things up in the New York suburbs. In two days, Masters, Inc., opened two discount house branches.

At the Paramus, N. J., opening (picture), some 115,000 people jammed the parkways for seven miles to buy their heads off, get in on the giveaways. An emergency police squad was summoned to keep things moving. Next day, in Elmsford, Westchester, the second store—in Masters' own shopping center—opened with the same fanfare. Masters is paying out $500,000 to blast the eyes and ears of the New York suburban market with radio, TV, and newspaper publicity for its new stores. The new branches and the New York City main store handed out $26,000 in giveaways to celebrate.

• **Significance**—The fact that two branches opened their doors isn't startling. Several of the bigger discounters have joined the rest of the retailing fraternity in the march to the suburbs. But the hoopla that attended the Masters opening pointed up two recent, and significant, developments in the discount world:

• The discount house has achieved respectability.

• In the words of Stephen Masters, president of Masters, "The hard sell has come to the discount house."

• **Leaders**—Masters isn't the country's biggest discount operation. E. J. Korvette, Inc., which only recently went into public ownership, chalked up sales of $56-million in the fiscal year just ended; Masters claims sales of about $20-million. Two Guys from Harrison is in the same league, and Polk Bros., of Chicago, is credited with sales of around $45-million. But as an old-timer, who remembers back to 1937 when Masters opened in a hole in the wall, Stephen Masters, now 43, is as articulate a spokesman for the discount way of selling as the industry knows.

• **Postwar Eruption**—Though the discount house is decades old, it was in the postwar years that it broke out as a disruptive force in retailing. In a sellers' market, the more conventional outlets—appliance stores, department stores—could and did get the full advertised price for hardgoods. This meant plenty of margin for the discount house to cut. Up to a point, "fair trade" regulations set a price standard that made it easy for the consumer to see how much he was saving by buying at a discount house.

Today, the buyers' market is here in hardgoods. There's no scarcity of product. The relaxation of fair trade (BW—Sep.1'56,p63) has made it easier for

Discount House

department and appliance stores to lower their prices. The conventional retailer has learned a thing or two from the hard-hitting discount house competition. How does all this affect the discount house's status?

• **Hard to Define**—At the start, you run into a problem of definition. In Milwaukee, a discount house usually means an under-cover operation, where a card or password gets a customer in. Sometimes it means a tiny operation that carries little stock, sells mostly out of a catalogue. In the case of Korvette, it means huge suburban stores where you can buy dresses up to $125, and food at Korvette's own supermarket.

To Masters, many such concerns aren't true discount houses. The most widely accepted definition is simply a store that consistently sells its goods at a lower markup than the competition.

This confusion explains why it is hard to measure the discount house's impact. A much-quoted, but unsubstantiated, figure a couple of years ago put U.S. discount sales at $25-billion.

David Leighton, Asst. Prof. of Marketing at the School of Business Administration of the University of Western Ontario, last year made some estimates in an unpublished doctoral thesis at Harvard. He felt that the $25-billion might not be wide of the mark for all discount selling (including any kind of price-cutting, loss-leader selling, and the like); that the discount house, as defined above, accounted for perhaps $750-million, and that the number of such discount houses now operating might be around 5,000.

But as Leighton points out, dollar sales nowhere near measure the true impact of the discount house proper. Every department store and appliance store would get his point. In the last few years, the discount house has given staider retailers in many cities a rough shaking. Consumers have felt the shaking, too—in lower prices, splashy ads of price wars and bargains, in store efforts to cut back deliveries, increased self-service.

• **Battle Lines**—BUSINESS WEEK took a look at some key cities across the country to see where the battle stands today. The survey confirms the ideas suggested by the spectacular openings of the Masters branches this week: (1) The line between the discount house and other stores is blurring; (2) the discount house is still growing, but at a slower rate. As a Salt Lake City discounter puts it, "We aren't hurting, but we sure have to hustle."

In a free economy, the inevitable has happened. The discount house has forced the hand of the giant retailers, in many cases driving them closer to the discount house's operating level. The giants, in turn, are forcing the hands of the discounters to upgrade their operations.

The lines have blurred so much, in fact, that William Willensky, president of Korvette, says, "It is an anachronism to apply the term discount house to us today." He adds, "Every retailer is our competitor." Similarly, a Buffalo retailer says, "We're all discounters now."

On the discount house side, the blurring shows up in wider lines. In the old days, radio, TV, appliances, and jewelry were the discounters' chief merchandise. In many cases they still are, but Masters sells anything from furniture to drugs; like Korvette, it is practically a department store. Korvette went heavily into softgoods two years ago; this line will soon bulk larger than hardgoods in its sales, it reports.

• **More Service**—Many discounters have always offered service, but now the pressure is on them to offer more. Says Masters, "We have to offer every service a department store offers." Masters already delivers—at a price; it sells on time; it has a small-appliance repair shop; it offers its own one-year guaranty in addition to the manufacturer's; it grants immediate returns and no questions asked. Now it is about to offer one service it hasn't had: some form of charge account.

The discounter has joined the rank-and-file merchandiser in stepping up advertising. Until last January, Masters contented himself with direct mail advertising; since then he has used newspaper ads. The money he is paying to publicize this week's openings indicates a change in direction on this score. Korvette budgets 1% of its sales for ads. A St. Louis discounter regularly advertises in newspapers at least twice a week, sometimes four times.

• **New Symptom**—The kind of store the discounters are building is another symptom. The densely crowded, hole-in-the-wall look in downtown cities is giving way to flashy buildings, parking spaces, esplanades, higher-priced locations.

On the other side of the ledger, the blurring shows almost as clearly. Hudson's department store in Detroit meets discount price competition item by item. So does a Los Angeles store (though the manager comments, "We're losing our shirt in the appliance department"). A big St. Louis store will meet the price if a customer raises the issue. A Richmond (Va.) store is trying what it calls "a devious trade-in policy." In Cincinnati, Shillito's threw

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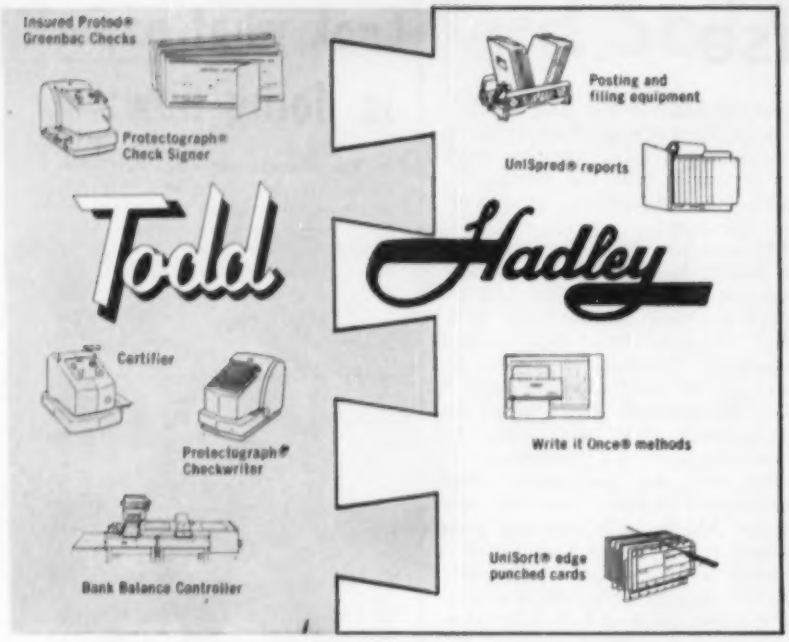
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the book at the discount house; retailers there say, "The discount house woke us up." In Chicago, big Carson Pirie Scott & Co. found an answer in its bare-bones warehouse selling (BW—Feb.27'54,p53).

• **Break-Even**—In spite of the apparent fusing of the two types of merchandising, the basic differences still hold.

What the discount merchant has done, says Professor Leighton, is to recognize the relation of cost, volume, and price to profits; to realize that in the long run it's the dollar profit, not the percentage markup, that counts. He has learned the supermarket's lesson that the dollar profit may be bigger even if his markup is lower because the lower retail price brings sales.

Masters puts it this way: His retail price is based on a sensible return on his cost. He adds a dollar or percentage to his cost to get his price, instead of using the traditional department store technique of figuring a sacred, set percent of selling price as his profit.

Masters claims he can break even on a gross profit of 11.9% of sales; most department stores average a break-even point of around 33%, according to the National Retail Dry Goods Assn. No discount house operator will tell his gross margin, but Leighton's study indicated that among eight discount merchants, the gross margin ranged from 11.5% of sales to 22.7%. For department stores, it runs around 36%. Yet, even with the lower markup, the big discounters claim they have a better net profit margin than department stores.

They can do this for several reasons. First, in a successful discount operation, the top boss is buyer, salesman, and administrator. This way, the operation shows enormous savings in executive and managerial payroll. Over 90% of Masters' employees meet the customers, he says; in a department store, it's closer to 50%. Masters has three and a half buyers. Plush offices, a hierarchy of assistants and secretaries don't exist. Because he stocks only fast-moving items, his turnover is greater.

• **New Strategy**—This formula has brought prosperity to some discount merchants. In the face of the department and appliance stores' determined efforts to beat the competition, can the discount merchant stick to his last?

There are some reasons for believing that he can't, or that at least he may have to modify his strategy.

Today, price is not the pulling factor it once was. Customers are demanding more for their money. Several department stores report they are winning back customers who have been "disenchanted" with the quality of goods or services offered by discount houses. And services cost money; so do any of the so-called merchandising frills.

• **Branching Out**—Until recently, most

discount houses stuck pretty closely to pre-sold items, backed by heavy manufacturer advertising. This made their over-the-counter selling job easy. As margins on appliances dwindled, discounters turned to other lines. Softgoods get no such manufacturer backing, for the most part, as hardgoods get. Handling apparel takes special buying skills, wider inventories, more selling. The same holds true of carpets and furniture.

It's no secret that the discount merchant has survived because manufacturers and distributors have found him a potent mover of their goods. Some department stores believe that if they do a strong selling job in hardgoods, the manufacturers will swing back to the traditional outlets. The major stores have the prestige, they argue, and they are big buyers, too.

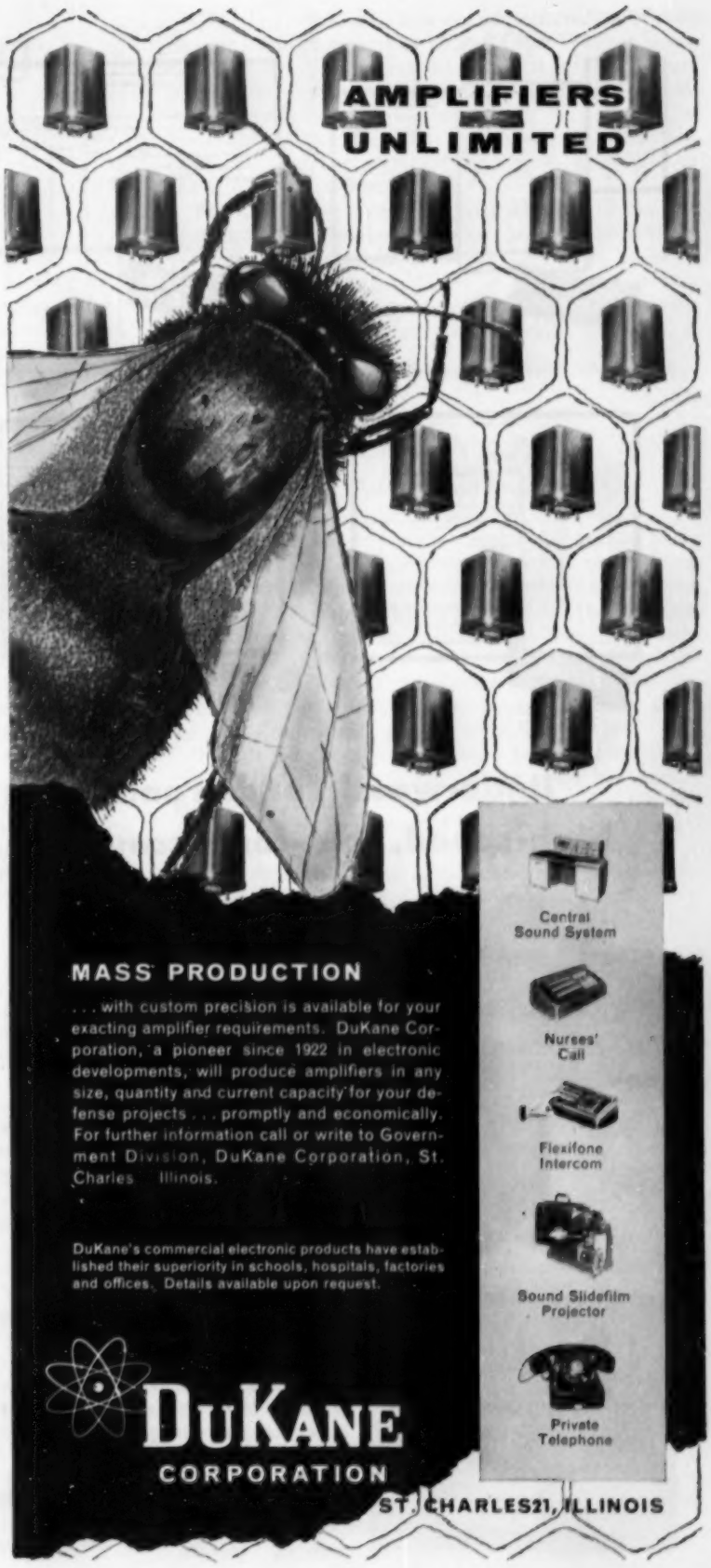
• **Fair Trade Factor**—Appliance dealers feel that the ebbing of fair trade has deprived the discount house of one of its biggest talking points. Masters replies that all fair trade does is make it difficult for Masters to sell fair-traded merchandise. He looks for fair trade to be dead within 18 months, but if it's still alive, he won't be too concerned.

Discount merchants grant that there's some force in these portents. In some of the cities the feeling prevails that the small discount houses are fading out.

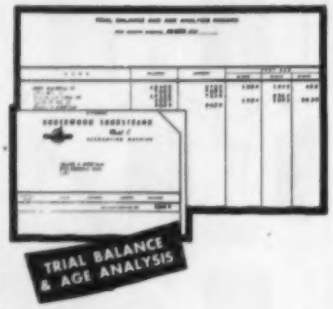
The better established ones, though, think they have the answer: more volume. That's one reason why Masters' plans include not only more suburban units in 1957, but a chain of small stores, which he may call Masterettes, splashed all over the country. He has one of these going on a test basis at York, Pa.—a combination retail and catalogue-order store. If it works, he envisions a chain of perhaps 500 of them. He points out that adding services doesn't always increase overhead—if you gain enough volume, too. He expects that when his new stores get under way, he'll be able to knock down his break-even point to 11%, thanks to the economies of chain store operation.

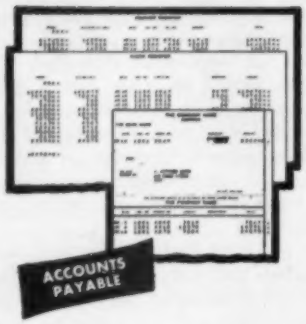
• **Last Stand**—It looks as though the ultimate battle will be between the big and the smaller operator, however he operates—as the appliance dealers said last January (BW—Jan.28'56,p61). It is the big buyer, whoever he is, who gets the break on prices and on advertising allowances. Significantly, often the discount house worries the average retailer less than the efficient merchandising of such giants as Sears, Roebuck & Co.

It seems likely, too, that it will be a long day before the typical discount house and typical department store merge. As an official of National Retail Dry Goods Assn. points out, "Not everyone can sell only the high-turnover items at a low markup. Someone has to carry the slow-moving goods." END



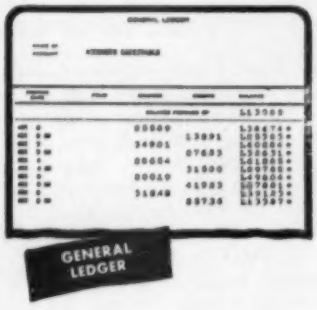










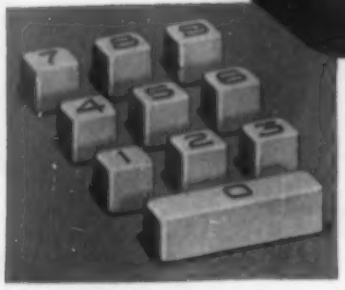


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In Marketing

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Trading Stamp Battle Gets Hot In Canada, Spreads in U. S.

The trading stamp boom is setting off fireworks over a wide front. In Ottawa this week, a battle is brewing right under the noses of Canada's legislators. Two leading food chains, Steinberg's Ltd., Montreal, and Dominion Stores, Ltd., Toronto, are launching trading stamp plans in the area. A third chain, Loblaw Groceterias Co., Ltd., Toronto, may jump in, too.

Reports are that the food chains don't really like trading stamps. They are adopting them in self-defense against the Independent Grocers Alliance, which brought stamps into the Ottawa area about eight months ago.

The chains are taking this step at the same time the Canadian Justice Dept. is preparing to examine sales promotion plans to see if they come under a legal ban on certain types of trading stamps. Canadian law requires stamps to be redeemed by the seller, wholesaler, or manufacturer, and they must be redeemable on demand.

The powerful Canadian Assn. of Consumers (BW—Sep.29'56,p53) last week filed a request with the Justice Dept. to amend or strengthen legislation so as to block use of stamps. The CAC argues that stamps make product quality a secondary consideration, bypass price reduction as a competitive weapon, and increase selling costs.

Officials in the U. S. are scrutinizing stamps, too. Last week, Dr. Persia Campbell, consumer counsel to New York's governor, held a fact-finding conference on stamps.

In Michigan, Cash B. Hawley, head of the committee on trade practices of the state Small Business Commission, has called for a state legislature study on the "competitive effect" of trading stamps.

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FTC Opens Up on Tobacco Company, Settles in Two Similar Cases

The Federal Trade Commission last week opened one new case and disposed of two old ones involving alleged discrimination in granting promotional allowances.

The new action is against Liggett & Myers Tobacco Co., makers of Chesterfield and L&M cigarettes. The commission charges that L&M illegally discriminated among its customers by paying some of them more than $1-million last year in allowances for promoting sale of its products, without offering others allowances on a proportional basis.

In 1954, FTC declared in its complaint, L&M gave six customers in Buffalo, N. Y., including four chain stores, $1,200 for store display material, while other customers in the city got nothing. The same year, FTC asserted, L&M paid Union News Co. $18,500 for counter displays in its 2,000 outlets, but failed to offer similar allowances to Union's competitors.

The cigarette company has 30 days in which to answer the complaint. A hearing is slated for December.

FTC last week also announced settlements of two cases involving suppliers of United Cigar-Whelan Stores Corp. The two suppliers—Bymart-Tintair, Inc., beauty preparations manufacturer, and Johnson & Johnson, maker of surgical dressings—agreed not to pay any customer for radio or television advertising supplied by the customer unless the payments are equally available to all the customer's competitors.

The cases were filed last spring when FTC charged United Cigar and four suppliers with discriminatory promotion arrangements involving TV shows. United Cigar signed a consent decree in August. The case against Serutan Co., another supplier, was dismissed; one against the fourth company, Anahist Co., Inc., is still pending.

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In Shoes, It's the Man Who Pays —But Over-All, Prices Hold Steady

It costs the country's males more on the average to be well shod than it does their wives—and the women's advantage has increased markedly over the last 10 years. This fact shows up in figures prepared for the 23rd National Shoe Fair, coming up in Chicago later this month.

Since 1947, the price of men's shoes has risen from an average of $9.85 a pair for dress shoes in that year to $10.27 last year. In the same period, women's shoes dropped from an average price of $6.93 to $5.80.

This drop in women's shoe prices helps to account for the fact that the over-all level of shoe prices has resisted postwar inflationary pressures. The nation's shoe bill this year is no larger than it would have been 10 years ago for the same number of pairs. Another important factor in holding down the over-all level is the variety of new materials, mostly plastics, used in making shoes. Besides that, the trend to casual and sports shoes—growing out of the increasing popularity of casual dress generally—has changed the product mix of the shoe industry to include more lower-price items.

Forecasts last December were that shoe production this year would taper off from 1955's record 566-million pairs (retail value, $3.7-billion). **But despite falling production throughout this year (BW—Oct.6'56,p184), the industry now expects at least to equal last year's figures.**

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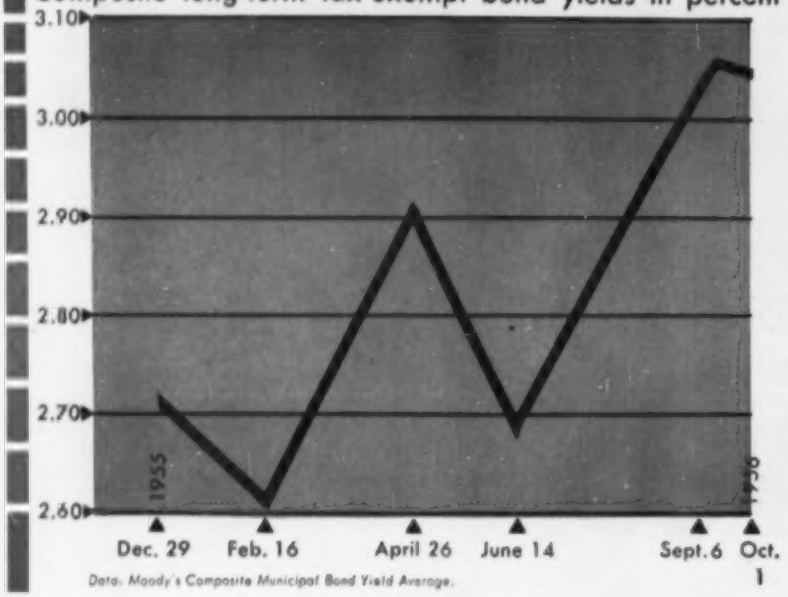
Marketing Briefs

Tetra Pak, a plastic-coated paper package shaped like a pyramid, is making **a strong bid for the packaging market.** A Swedish machine forms the package, fills, and seals it, all in one cost-saving process. The process isn't new, but Sunrise Dairies, Hillside, N. J., is first commercial user in the U. S. Crown Zellerbach Corp. supplies the polyethylene-coated paper. The package has great strength, nests compactly, is handy for individual servings. One drawback: Once it's opened, it can't be resealed.

Canadian liquor prices are due for a boost, following Seagrams' move in the U. S. last week (BW—Oct.6'56, p145). "Informed sources" say the Quebec Liquor Commission is unlikely to absorb the price hikes.

Tax-Exempt Yields Stick at Year's Highs

Composite long-term tax-exempt bond yields in percent



Data: Moody's Composite Municipal Bond Yield Average.

Refuge From a Shaky Market

Faced with a weary stock market and tormented by doubts of its recovery (page 23), a number of Wall Street's customers are finding their investment haven in tax-exempt bonds of states and municipalities. For some investors, tax-exempts have two basic advantages: (1) They are exempt from federal income and surtaxes and when you add this feature to their yield you find the return on the highest grade tax-exempts is considerably higher than on equal quality corporate bonds, and even better than many blue-chip equities: (2) capital that's invested in tax-exempts looks, to some investors, safer than if it were in a shaky stock market.

Of course, the tax-exempt trading market has not been wholly a bed of roses recently. The thorns have stemmed mostly from the fact that the Federal Reserve's money tightening moves have driven interest rates generally to their highest levels in nearly 30 years. While high rates attract new investors, the coincident slump in prices discourages investors already in the market.

This slump has been rather sharp in the past three months, but it has meant that yields have risen to their best levels in three years (chart, above). Standard & Poor's index of composite municipal yields is now at 3.04%, just a shade under the year's high of 3.06%.

• **Turn**—In the past couple of weeks, the long price slump in municipals has turned around. Right now, though, the future of the trading market for already outstanding municipal issues depends largely on the reception that new issues get from investors.

Within the next month, over $450-million in new issues of tax-exempts are scheduled to come to market. That, by any odds, is a large lump to swallow. Two factors could slow this load of upcoming issues to a crawl: (1) further tightening of rates generally, especially such short-term rates as the Treasury bill rate, a major determinant of rates for short-term municipals; (2) an early build-up in the wad of unsold bonds already on dealers' shelves. Inventories of unsold bonds are now only $170-million. But if that figure goes higher, it could spell trouble.

• **One Hope**—This week, top-grade issues moved fairly well, but investors were showing little interest in lower quality municipals unless yields were particularly high.

Wall St. Talks . . .

. . . about rates on business loans . . . and on corporate bonds . . . probe into Northeast Airlines trading.

How tight the money: Business borrowers paid an average of 4.14% on short-term loans from New York City banks in September, the New York Fed reports this week. That's the highest rate in 24 years, up from 3.89% last June and well above the 3.48% for September, 1955. The rate on term loans—more than a year's duration—was 3.84% last month, down slightly from the 3.86% of last June, but well over the 3.45% of a year previous.

And if you think bank rates are getting steep, look at what lenders are demanding from bond issues. California Electric Power Co. had to pay 4.47% for its new issue of 30-year, 4¼% debentures. The last time the utility tapped the bond market was in August, 1955. Terms then: a 3⅜% coupon for 30-year bonds that were priced to sell at a 3.61% basis.

Contrary to a recent Wall Street rumor, SEC is continuing to press its investigation of August trading in stock of Northeast Airlines, Inc. At that time, Northeast jumped from 9⅛ to 12½ on the American Exchange following a closed meeting at which the Civil Aeronautics Board decided to award the airline a New York-Miami route. CAB claims there must have been a leak from that meeting, and SEC is probing for "possible violations of the securities laws particularly the anti-manipulative provisions of the Securities & Exchange Act.

It's hard to take seriously the talk about Communist interests buying control of parts of American industry. Charles R. Stahl of DePontet & Co. takes note of SEC statements that "Swiss bank holdings are not as innocuous as they appear." He says that, "in practice," foreigners couldn't control our industry. For one thing, SEC requires holders of more than 10% of stocks to disclose a long list of facts about themselves. Then, too, the Defense Dept. keeps close tabs on companies that have defense orders. Besides, says Stahl, at the end of last year, foreigners owned only 3.6% of the dollar value of all securities listed on the Big Board, and Swiss interests held only 0.72%.



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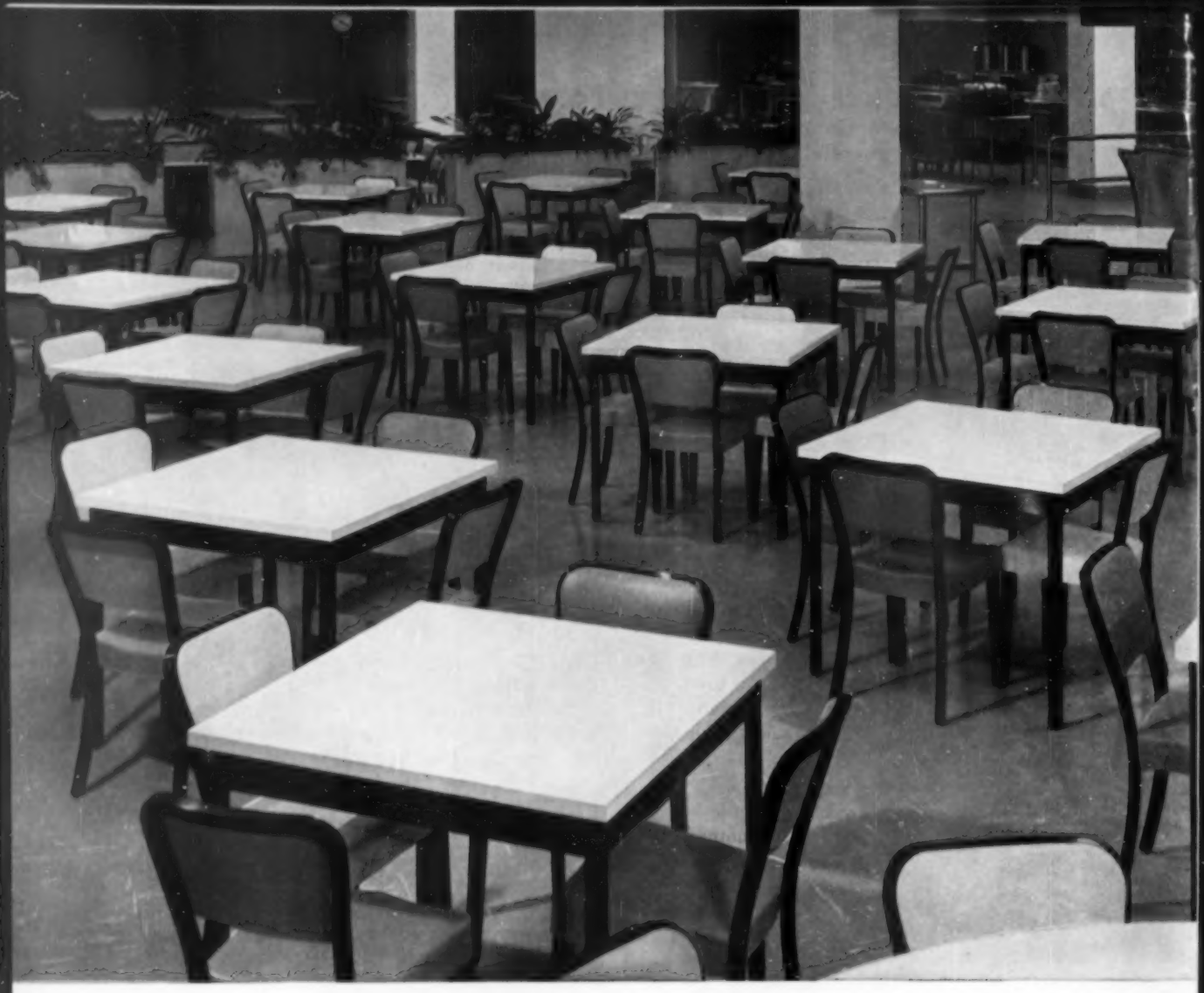
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Here's **STYLE AND COMFORT** *for better employee relations*

There's never a blue Monday in this cafeteria. Colorful furnishings chase away gloom. Setting the pace for good cheer and high morale are the Goodform Aluminum Chairs and Tables—done in ebony anodized finish, upholstered in brilliant plastic.

Employee morale was a first consideration in Colgate-Palmolive's decision to install Goodform dining room equipment in its new building in New York City. No less important are the practical advantages.

The light weight of aluminum makes these chairs and tables easy to move or handle; their welded construction keeps them permanently rigid, solid and strong; the hard, anodized finish reduces cleaning and maintenance to simple soap-and-water washing.

In short, beauty and comfort, low maintenance and long life all combine to make Goodform the ideal furniture for business and institutional use.

You can see Goodform Aluminum Chairs and Tables at the local GF showroom. See your classified phone book for the address. Or write for a color catalog. The General Fireproofing Company, Dept. B-72, Youngstown 1, Ohio.

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GENERAL FIREPROOFING
Foremost in Metal Business Furniture

PERSONAL BUSINESS

BUSINESS WEEK
OCT. 13, 1956



Toys won't make your child's world spin faster until Christmas morning—but now is the best time for you to think about them and shop for them. This month you'll find that most stores have the best selection of the latest toys and salespeople with plenty of time to help you.

First step is to develop the right attitude about toys—they're a lot more than just something to keep the kids occupied and out of mischief. Think of them as playtools, not playthings. Any good toy must be fun, safe, and durable; it should help your child develop mentally, physically, socially, or vocationally. A really superior toy can do all of these—so say the experts at Toy Guidance Council, New York.

Your child's age and sex alone shouldn't determine what you buy. Just as important are the child's stage of development and his aptitudes and interests. Toys that are too advanced will frustrate him; those that are too simple will bore him and soon find their way to the attic.

Your child will get a lot more out of a toy that requires active participation, either by himself or with other kids. A mechanical toy that he merely winds up and watches means little to him. For a child who is shy or tends to play alone, get a toy or game that will force him to play in a group. For a child who is especially introverted, professional counselors often recommend getting toys that require the father's or mother's participation: for example, a transistor radio set for boys, or a practical cooking set for girls.

Safety is another factor to remember when you're buying toys. Select toys without sharp edges or small pieces that might be swallowed. Breakable materials should be heavy enough not to splinter dangerously; paints should be non-toxic, especially in infants' toys. If you see a toy with a blue and silver seal marked "Educator Approved Prestige Toy," you can feel sure it meets the highest standards of safety, quality, and functional benefit.

Don't give electrical toys to kids under six. And should you give them to older children, make sure they are safe. Electrical toys that have an Underwriters Laboratory (UL) Seal of Approval have been safety-tested. If you're thinking of getting your boy an electric train, remember that children are best introduced to these at about the age of eight.

Don't be overcautious about buying a bike for your youngster. If you show an unwarranted fear about possible mishaps, you'll instill an abnormal fear in the child, according to psychologists. There's no set age limit; it's all a matter of individual development.

When you start buying for kids over 12, remember that their "playtools" reach the level of arts, crafts, and sports. Starting at this age, let the kids decide what kind of "toys" they want. This is when their interests begin developing along vocational lines. What may interest you may have no appeal at all for your child.

There are three rules of thumb that experts emphasize: (1) Don't buy for your children toys that you wanted but didn't have as a child; (2) don't buy expensive toys thinking that more money means more satisfaction—a $50 bike or a $40 puppet set will probably mean more in the long run than a $395 miniature sports car, or a $285 mink-coated doll; (3) of all kinds of toys, musical ones probably have the most profound effect on children, from infancy up.

Here's a quick rundown of toys recommended for different ages:

Infants—floating bath toys, sound-making push toys, washable dolls and animals. **One to two years**—rockers, victrola records, picture books, nesting blocks, dolls, sandboxes. **Two to four**—crayon sets, building blocks, simple puzzles, tricycles, cowboy outfits. **Four to six**—roller skates, scooters, painting sets, group games, blackboards, doll houses. **Six to eight**—sewing kits, model building sets, sports equipment, school materials, marionettes, telephone sets, mechanical banks. **Eight to ten**—musical instruments, chemistry sets, microscope kits, magic sets, sewing machines, safety-tested electronic toys.

Spreading your toy purchases throughout the year might be a good idea. Children grow fast—mentally and physically. What interests them at Christmastime might be "old stuff" by summer. Keep in mind, too, that a child should have a "balanced diet" of toys—toys for indoors and for outdoors, activity toys, and books.

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Here are some books just out that offer you some good casual reading:

• **Days to Remember**, by John Gunther and Bernard Quint (Harper; $5.95), is a picture-and-word story of America, 1945 through 1955; it's a vivid, striking account of the last 10 years, rich in memory.

• **Adventure in Diamonds**, by David E. Walker (Norton; $3.50), is a fast-moving true story of World War II; the undercover adventures of three men assigned to smuggle vital industrial diamonds from Holland—one jump ahead of the Nazis.

• Two lively sea stories, as varied as the sea: **Posted Missing**, by Alan Villiers (Scribners; $4.75)—true stories about ships that have disappeared at sea in the last few years. **Princess—New York**, by Joe Richards (Bobbs-Merrill; $4.00)—a love affair between a man and his boat, an exciting voyage from New York to the Caribbean.

• **The Red Sands of Santa Maria**, by Bill Murphy (Dodd, Mead; $3.75). The bull ring evokes a miracle and gives new life to the people clamoring about it—in clamorous old Mexico.

• **Merry Christmas, Mr. Baxter**, by Edward Streeter (Harper; $3.00), is a hysterical tale about a businessman who decides to do his Christmas shopping early.

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Olive oil, sunflower-seed oil, and other plant and fish oils may keep you living longer. Medical research has found that these foods tend to decrease the amount of fatty substance in the blood—thus lessening chances of a coronary thrombosis. Animal fats, butter, cream, and whole milk are the foods directly related to blood clotting (BW—Feb.18'56,p175).

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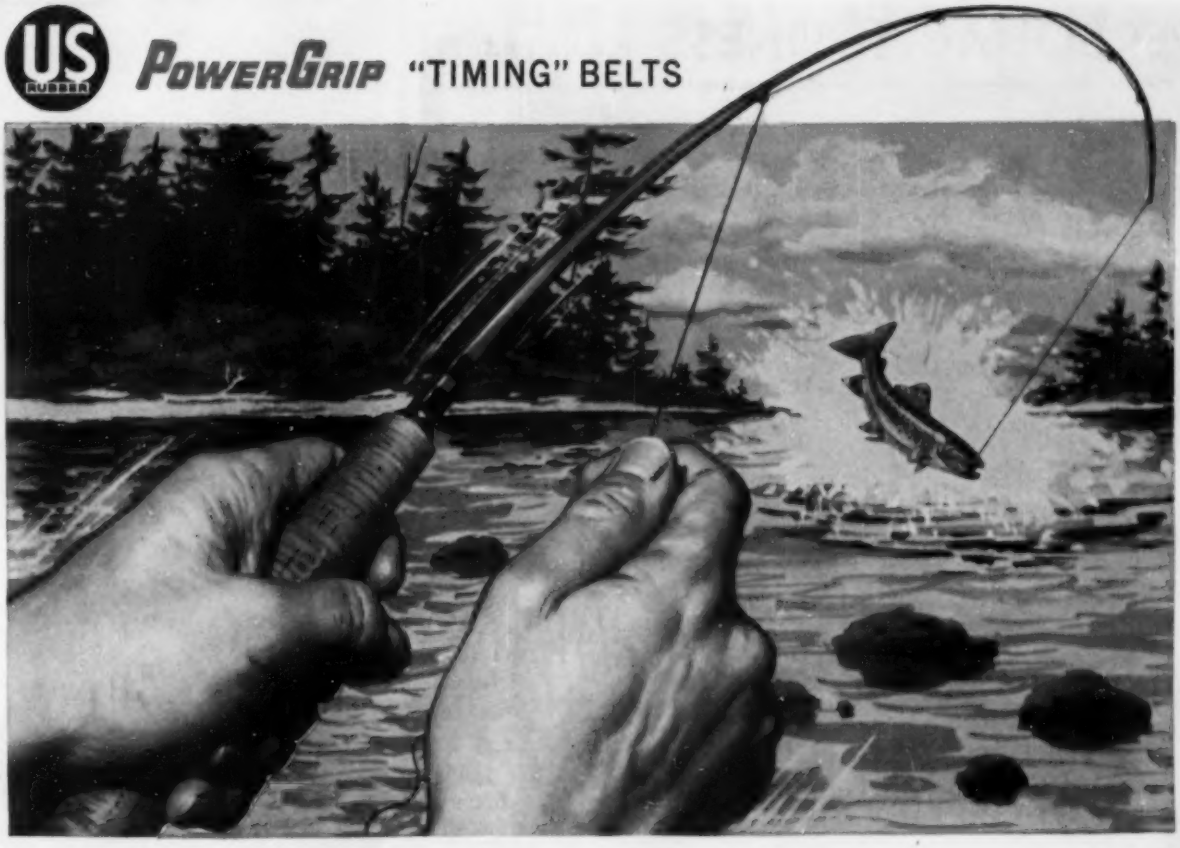
Starting Oct. 15, a new air-sea travel plan will be available to Europe-bound travelers. American Export Lines and Trans World Airlines are offering combination round-trip cruises at special rates—you fly one way and sail the other. Twelve cruises are planned for this fall and winter (including sightseeing, hotels, etc.) for two, three, and five weeks.

—•—

Don't be disappointed if you can't get your favorite brand of Scotch this fall. Imports are higher than ever, but so is demand. Since the war, more and more middle-income Americans have switched to expensive drinks.

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US RUBBER ***PowerGrip*** **"TIMING" BELTS**



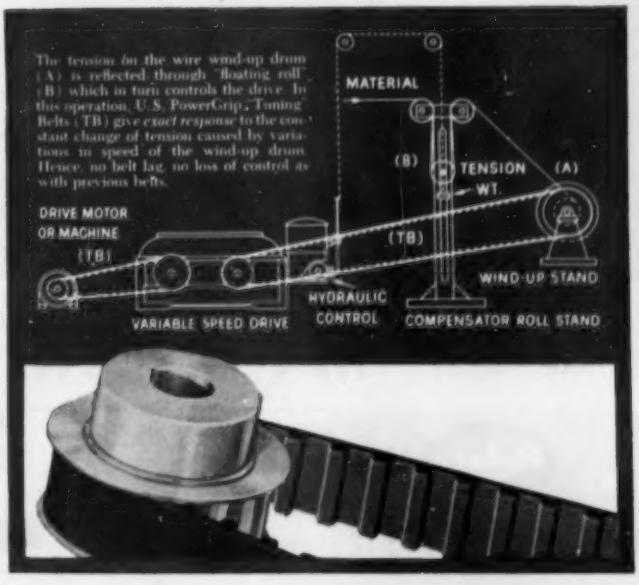
Precise Tension Control is Vital

He's just hooked a beauty! Now comes the delicate job of keeping that line under constant, *controlled* tension. Without it, the fish will probably get away.

Controlled tension is also vital when winding a web of material—whether it be plastics, paper, threads, metal strips, cotton. Without it, the web will "get away"—stretch, wrinkle, or break. That's why U. S. PowerGrip "Timing"® Belts are so integral a part of the "floating roll" (illustrated at right) and similar industrial tension controls.

These unique transmission belts provide immediate, positive response to the ever-changing tensions that occur when winding a web of material. It is one more example of PowerGrip's ability to simplify and improve a power transmission unit.

For appliance design or plant conversion—from flea-power to 1000 horsepower—U. S. PowerGrip "Timing" Belts deliver near-100% efficiency at exacting speed controls. These belts, plus expert power transmission service, are obtainable at the 28 "U. S." District Sales Offices, at "U. S." power transmission distributors, or contact us at Rockefeller Center, New York 20, N. Y. In Canada, contact Dominion Rubber Co., Ltd.

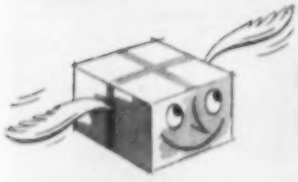


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United States Rubber



Cutaway shows one of two hydraulic jacks which raise and lower Truck Leveler.



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Rotary Truck Leveler raises or lowers truck bed to dock level for speed, safety and economy

This modern hydraulically-operated loading dock device speeds all usual loading methods and also equips docks to handle "containerized" shipments and similar new developments in cargo handling.

The Rotary Truck Leveler raises or lowers the trailer to bring the bed level with the loading dock. This eliminates sharp, dangerous inclines and permits fastest loading and unloading with any type of materials handling equipment. The Truck Leveler platform, supported by two oil-hydraulic jacks, has a capacity of 40,000 lbs. and vertical travel of 28". It will handle highway carriers of any size.

Recessed into the pavement in front of the truck loading dock, the Rotary Truck Leveler takes no space. Dock platform is completely free of obstructions. Operation is by dependable, economical Rotary Oildraulic electric power unit. Easily installed at new or existing loading docks. Mail coupon for more information.

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Whirlybird

On the final leg of a trip to take part in Pasadena's Tournament of Roses festivities last New Year's Day, Defense Secy. Charles Wilson became stranded at the Alhambra (Calif.) heliport. The reason: Alhambra's heliport happened to be located in the city's refuse disposal area, and over the holiday the place was locked.

Two hours later, Pasadena officials rescued the enraged Secretary and presented him with the keys to Pasadena.



Market: Still Up in the Air

Wilson was not mollified. What he wanted, he declared, was the key to the Alhambra dump.

That a heliport should still be located in a dump in this day and age shows all too clearly that the commercial helicopter has not yet come of age. It's still several years from being the flying bus carrying millions of people in short haul, inter-city transportation predicted for it.

• **Impetus**—Proponents of the whirlybird this week, however, saw a brighter future for their pet in merger talks between Northrop Aircraft, Inc., and Vertol Aircraft Corp. Vertol is one of the big helicopter manufacturers, producing the Workhorse (picture) for the military. Northrop, which is seeking diversification, could supply the money needed for Vertol to engineer a big civilian 'copter.

Some observers believe that this news may act as a spur to the Helicopter Div. of Bell Aircraft Corp. and the Sikorsky Div. of United Aircraft Corp. Both companies already have advanced designs for a big helicopter.

The merger talks also may dissipate some of the pessimism that has crept into the situation. A few skeptics have been questioning that the helicopter would ever become a vehicle for mass transportation. They believed that, with the thinking and money that's going into VTOL (vertical take-off and

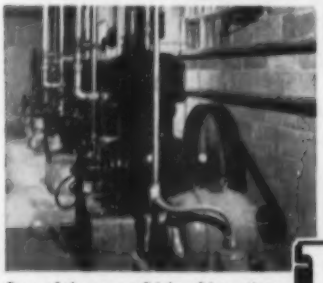


$500,000 Food Storage in Charleston Kept Cold with

FRICK Refrigeration



Corner of a storage room held at 40° for Pearce-Young-Angel Co.



Four of the seven Frick refrigerating machines used by Pearce-Young-Angel at Charleston, S. C.

Pearce-Young-Angel Company serve 17 South Carolina Counties with fresh fruits, produce and frozen foods. Their new warehouse includes three banana rooms, four big cold storages holding a total of 25 train carloads, and two freezer rooms holding three carloads.

Frick refrigeration, installed by the Piedmont Engineering Co. of Charlotte, N. C., carries the entire cooling load with economy and dependability.

Modern Frick air conditioning, ice making, quick-freezing and refrigerating equipment can likely increase profits in YOUR business. Ask for figures today; write

DEPENDABLE REFRIGERATION SINCE 1882

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WAYNESBORO, PENNA. U.S.A.

Cuts clerical costs 56%

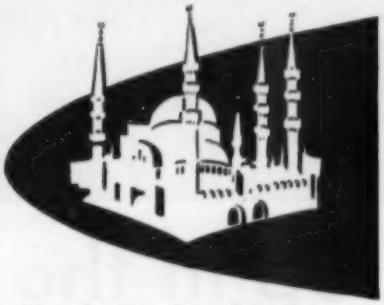


Tests prove that Globe-Wernicke's Visible Records System saves up to 4½ *hours of clerical time per 8 hour day*, keeps your records in sight, in place and in order. See your G/W dealer or write us for full information, Dept. A-10.

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OFFICES IN ALL
PRINCIPAL CITIES

". . . the Korean War put the fireworks under the helicopter development program . . ."

HELICOPTERS starts on p. 188

landing) and STOL (short take-off and landing), an airplane will arrive to do the job before a big, economic helicopter ever gets off the ground.

Although the helicopter still is an awkward-looking machine beside today's and tomorrow's fixed-wing aircraft, most bets are that eventually it will come along and perform the mass transportation task predicted for it. But this won't happen much before 1960.

I. Why the Delay

Reasons for the delay have been and continue to be partly technical and partly economic.

Technically, the jump from a little helicopter to a big one is harder than most people think. Certainly it's harder than the experts of a few years ago expected. Today, commercial helicopter lines are flying what should be the last and biggest of the little helicopters.

The first successful helicopter was flown in Germany in 1937. In this country, whirlybirds had to wait until 1939 when Igor Sikorsky made the first successful flight. It was 1947, however, before the machine emerged from the experimental gimmick stage. The Army received its first delivery of two-place Bell Aircraft Corp. helicopters in 1946. That was also the year the same basic helicopter was certificated by the Civil Aeronautics Administration for commercial use—the first to be so honored.

• **War Baby**—The Korean War put the fireworks under the helicopter development program. It was in Korea that the still infant "chopper" showed what it could do—ferrying supplies and, more important, saving thousands of lives in rugged terrain.

It was and continues to be the only aircraft able to rise vertically, hover, fly backwards, sideways, forward, and light on a small patch of ground. And when an aircraft with these skills is needed—in wartime, floods, famines, or other disasters—the helicopter is worth its high initial and maintenance cost because nothing else can do the job.

If this lesson needed underlining, that emphasis was supplied last autumn in the Northeast after the floods. It is being supplied again in Algeria, where the French are operating scores of helicopters.

Following Korea, the U. S. Army continued to pour money into heli-



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Four-year-old children are "runabouts." They should be taught to watch for cars in driveways and to ride their tricycles on the sidewalk.

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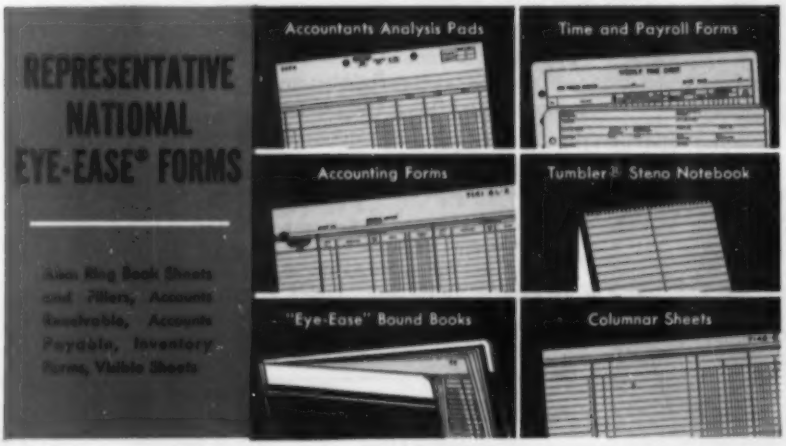
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copter research and development programs. Atomic warfare will call for a far wider dispersal of troops in the battlefield and at the same time it will call for even greater mobility than was possible in World War II.

• **Bigger Role**—The helicopter, therefore, may play a big role should war occur again. Current Army plans call 36 helicopter companies with 21 troop-carrying helicopters to a company. And more machines will be needed for support and logistics.

But the Army has limited funds available for aviation. Furthermore, for military purposes the helicopter isn't the entire answer. Excellent as whirlybirds are in their work, they're still slow, short-ranged, and hard to maintain in the battlefield. So, the Army's money is being spread around not only for helicopter development programs but for VTOL and STOL research besides.

• **Also Interested**—The Navy also has its eye on helicopter development not only for carrying troops but in anti-submarine warfare and rescue missions as well. Like the Army, it too is interested in bigger, faster, and cheaper helicopters—helicopters that, incidentally, would represent the jump necessary to put commercial operators in business.

But, says Cmdr. H. S. Brown of the Rotary Wing Section, Naval Bureau of Aeronautics, "these take time. What's needed is a power plant that's in production and is cheap. The plant must be reliable so we can count on the helicopter being ready to take off on a mission at a moment's notice, and it must be such that the amount and cost of maintenance necessary for present helicopters goes down.

"I'd gladly spend millions of dollars on a development contract for helicopters with operating characteristics outlined by the commercial operators. Then these operators could come in and take the helicopters off the production line. But you have to be able to buy such a helicopter today. And the trouble is you can't. The power plant isn't ready.

"We're going just as fast as we can without throwing the public's money away on designs that don't get anywhere," he concludes.

II. Nearing the Goal

Actually, two gas turbine engines are now in final development stages in this country. Most observers think these power plants or improvements on them will answer the military's needs as well as provide the impetus needed to make the jump from little helicopters to big ones. Here's why:

• The turbine engine is lighter. One of the newest piston engines used

in helicopters, for example, develops 1.07 hp. per lb. On the other hand, a turbine develops 3 hp. per lb. This means it will be possible to put two or more engines in a helicopter, and that for big commercial helicopters is essential because they can then continue flying should one engine konk out.

• The gas turbine doesn't vibrate. The nature of the helicopter is such that it requires a complicated transmission system between the engine and the two rotors. In addition, the blades on the rotors must change pitch as they circle. Today's piston engine gives the transmission and gears of helicopters a terrible shaking. That's why they must be overhauled frequently. And that's why maintenance costs are so high. The turbine will help solve this uneconomic aspect.

• It's quiet. The commercial helicopter, if it's to be practical, must land and take off at downtown locations. With piston engines, though, helicopters make such a racket that it's doubtful if they would be allowed in many communities. With turbines, they should be quieter.

There are two major problems connected with the turbines as far as the military and commercial operators are concerned. One is that the engines are still in their development stages so no one has an exact idea of what they will do. The other is that the gas turbine engine suitable for helicopter use must be built with watchlike precision. Hence, it will be expensive.

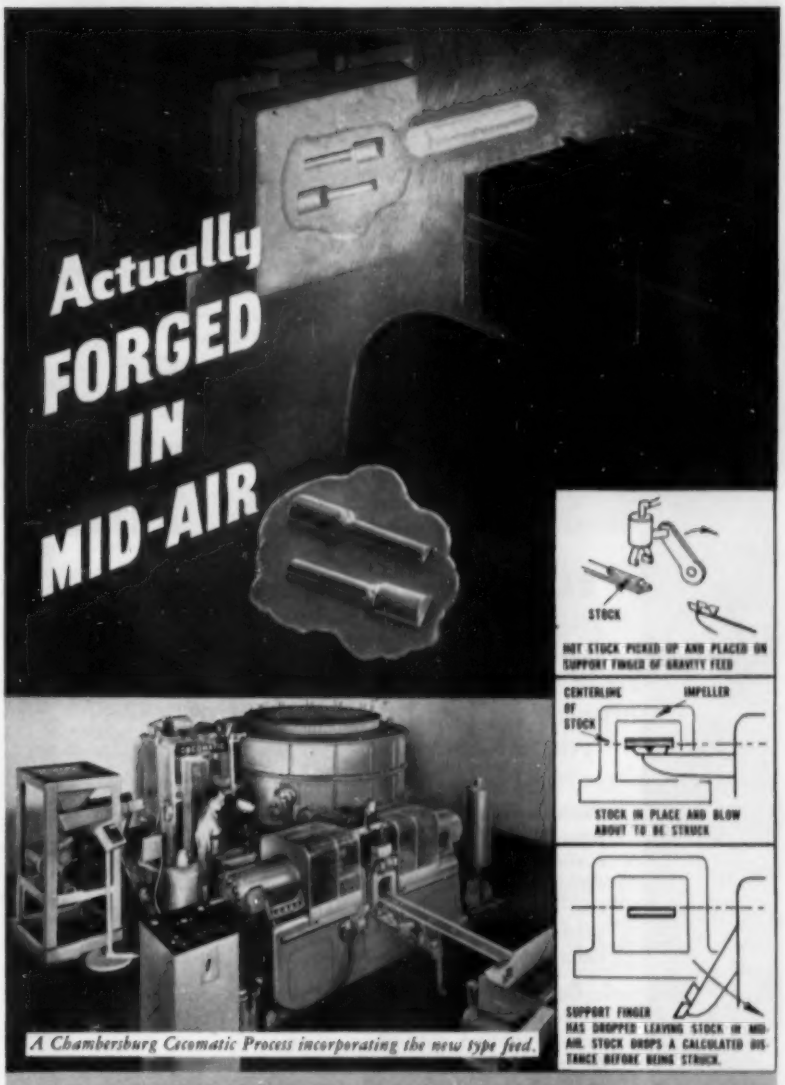
• **Complications**—When it comes to the economic reasons for the delay in developing the commercial helicopter, the problems are even more complicated.

Today there are three scheduled passenger helicopter lines in this country: Los Angeles Airways, Chicago Helicopter Airways—formerly Helicopter Air Service—and New York Airways. Chicago Airways received authorization to carry passengers only last August, but the other two provide dramatic examples of how heavily subsidized a scheduled passenger operation must be.

Until this fall, New York Airways' largest 'copter was a converted military model capable of lifting five passengers (except on a hot day when the air is less dense and it can lift only three).

Because it has a single engine, it must fly above a certain altitude and over a carefully selected flight path in case the engine fails. Should the engine sputter and die, the helicopter can glide down to a safe landing place. This, however, limits the type of weather in which helicopters can fly—the ceiling must be above a certain level—and it also restricts them to certain routes over vacant emergency landing areas.

Recently, 12-passenger helicopters have been introduced into commercial



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". . . most operators agree that there should be two basic types of multi-engine 'copters . . ."

HELICOPTERS starts on p. 188

use. These are capable of cruising at 105 mph. compared with the 85 mph. of the earlier model. But since they also have but one engine, the same limitations apply.

Using the smaller helicopters in 1955, New York Airways flew 24,569 passengers and received a federal subsidy exclusive of mail pay amounting to $1,436,599.

Raymond Sawyer, executive director of the Civil Aeronautics Board put this in even more dramatic fashion last January: "The average price of each passenger ticket sold by New York Airways is $7.44," he said. "The CAB subsidy per passenger carried by New York Airways averages $48.99. The figure for Los Angeles Airways is even higher."

• **Misleading**—These figures are misleading because they don't take into account the cargo and express carried by helicopter lines, but they indicate how uneconomic scheduled commercial carriers are in their present stage.

According to CAB, "The board and staff are completely sympathetic to helicopter operations but we do have a responsibility to see that the taxpayer's money is spent properly."

So, CAB is holding back on the 60-odd applicants for scheduled helicopter service for cities around the country until "helicopter operations are through with their development and experimental stages." CAB, then, is also waiting for a big, economic helicopter.

Furthermore, the three scheduled commercial operators have only temporary certificates from CAB—which makes money raising difficult for them. And periodically they must go back to CAB to explain their wants. In effect, CAB controls the number of helicopters they can buy.

III. Ceiling on Market

All this puts a very definite and small ceiling on the commercial passenger helicopter market so far as producers are concerned. This, then, is one reason why the manufacturers have been slow to develop big passenger helicopters.

Lee L. Douglas, vice-president for engineering of Vertol Aircraft Corp. (formerly Piasecki Helicopter Corp.) mentions another reason. "The problem of the helicopter," he says, "is that development costs are much greater than with fixed-wing aircraft. Hence, when it comes to the larger sizes, the helicopter manufacturers with their current

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small research funds would be hard put to bear the development costs alone."

In other words, the helicopter industry is spinning in a vicious circle. So long as there isn't an economic helicopter, the carriers must be on subsidy. So long as they're on subsidy, CAB won't certificate any more carriers. With so few carriers, the manufacturers haven't been willing to develop and build an economic commercial helicopter. This means commercial operators must fly converted military equipment, with which they cannot make money. This, in turn, means they must stay on subsidy, and that begins the circle again.

• **Break-Out**—If they could once break out of this circle, commercial operators believe the helicopter industry would be "off and running." Many of the applicants now before CAB could be certificated. Others who have looked long and carefully at passenger helicopters and decided against them might reconsider.

These include trunk airlines and even Greyhound Corp. Said an official of National Airlines, which once tried out funneling passengers from Florida towns to Miami for the long distance, fixed wing runs: "If an economic helicopter were developed we would most definitely be back flying short distance hauls with that equipment."

Robert L. Cummings, president of New York Airways, estimated recently that if the log jam could be broken there would be a domestic market worth $100-million in big, commercial helicopters alone at the outset. Add to this, he says, $30-million a year for spares and replacements. Later, orders for new helicopters could grow to be worth several hundred million.

This compares with the civilian backlog of helicopter orders as of June 30, 1956, which amounted to $49.7-million and the military backlog on the same date of $422.3-million. Most of the helicopters on order for the military would not meet commercial operators' needs. Many are for rescue work, others for hauling heavy equipment. Because the military whirlybirds must be able to take off from mountain tops and hover in windy canyons, it's "too much horse" for civilian needs.

The civilian helicopter market today is composed mostly of orders for smaller craft. These are used where they can do the job better and for less than anything else could. Such jobs include exploration and transportation in remote regions, transportation to offshore oil wells, power line patrolling, crop dusting, forest fire fighting, police work, and even executive transportation.

• **Little Competition**—In the case of these smaller helicopters, they either have no competition or they are so much better than available competition,

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that they are worth their high price and operating costs. In that connection, the three-place Bell costs $35,000 to $45,000 depending on the model; the five passenger Sikorsky used by scheduled operators runs in the neighborhood of $150,000; and the 12-passenger Sikorsky before radio, navigational aids and "fixing up" costs approximately $270,000.

Regardless of costs, however, the small helicopters are finding many uses where they return savings or profits to their owners. Lawrence Bell, chairman of Bell Aircraft, says, "The helicopter is like a power shovel. If you need one it's the only machine capable of performing a given task efficiently and economically."

The big transport helicopter faces a different problem. It must compete with railroads, buses, taxis, and fixed-wing airplanes for short-haul traffic. If it can do so successfully, there's a tremendous potential market waiting for it. The Civil Aeronautics Administration recently predicted that by 1965 four times as many passengers would be using helicopters as now use all the airlines.

IV. What Kind of Copter?

What, then, is the big helicopter that can capture this market?

Most operators and would-be operators are agreed there should be two basic types of multi-engine helicopters. One should be a 20- to 30-passenger machine for metropolitan service. This would be used to fly from airports to downtown heliports and from suburbs to cities. It should have a cruising speed around 125 mph. And, most important, its direct operating costs must not exceed 10¢ per seat mile. This compares with the direct cost of between 20¢ and 30¢ a seat mile in the latest 12-passenger helicopters, and 50¢ in earlier models. Operating costs for six-wing planes average 2.5¢ per seat mile.

• **Bigger Still**—Later, a bigger machine will be needed to operate along with the above helibus. The larger 'copter, carrying 40 to 50 passengers at a cruising speed of around 150 mph., would be designed for intercity routes such as New York to Philadelphia, Chicago to Milwaukee, or Baltimore to Washington. Here its ability to land and take off in the middle of a city would make it faster than a jet plus airport bus.

The bigger helicopter must not have a direct operating cost in excess of 6¢ to 7¢ a seat mile to be competitive with other forms of transportation and still make a profit.

The bigger of the two machines would be particularly suitable for European carriers such as Sabena and British European Airways, which envision heli-

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copter services between cities on the Continent.

• **Blueprints**—The biggest manufacturers are now optimistic that at least the first of these two helicopters is finally practical. Says Vertol's Douglas, "a 30-passenger, multi-engine helicopter is now well within the present state of the art. We told the International Air Transport Assn. recently if we decide to go ahead with the project we could have one ready and certificated for commercial use in from three to four years."

Bell and Sikorsky Div. of United Aircraft also have advanced designs for the first type of big helicopter with characteristics called for by the operators. (The second type would take about five years after the decision to begin work.) And their timing is similar. According to Bell, its transport helicopter could be in production within 36 months. Like Vertol, however, its decision to go ahead may rest on obtaining military support in the form of prototype contracts.

• **Threat From Abroad**—Though the three U.S. manufacturers closest to making the jump to big helicopters would like to wait for government help, one factor may affect their decision: The British and French are going ahead.

If either country should come up with an economic transport helicopter, the U.S. manufacturers might find their indecision had cost them their market.

While this prospect sends a chill over the manufacturers, it does help force the issue. And that, so far as commercial operators are concerned, is just what's needed.

It looks, therefore, as though in another three or four years the helicopter may become the flying bus—the means of mass transportation that has been awaited so long. And that, in turn, means that many cities and towns will need downtown space for heliports, since the king-size 'copters will be too big for landing on today's roofs.

• **How Long**—The remaining question is: How long will the helicopter be around before something else takes its place?

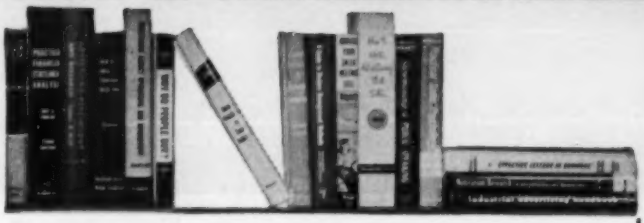
Most people in the industry give it at least 20 years. While strides are being made in other types of vertically rising aircraft, these craft will be even less economic for the commercial operator than today's helicopter for a long time to come.

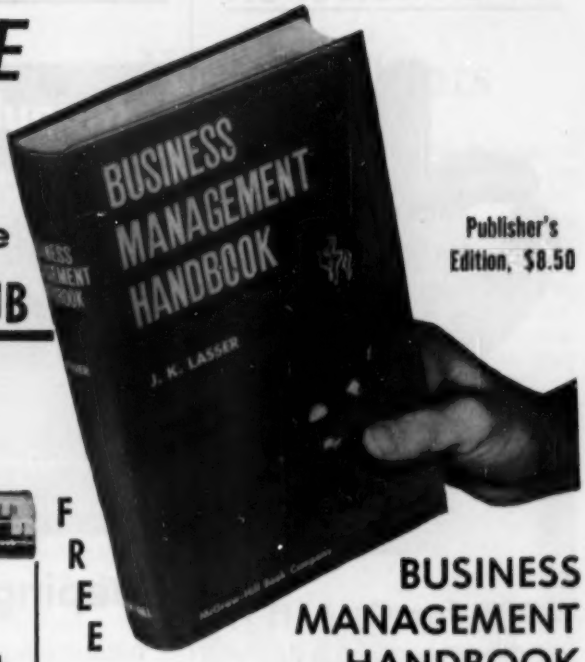
Though it is now possible to achieve vertical lift, the real headache is making VTOL and STOL planes easy to control and safe. For all the awkwardness of the great whirling blades, they do give helicopters pinpoint control and, should the engine fail, they do windmill—letting the whirlybird gently and safely down to earth. **END**

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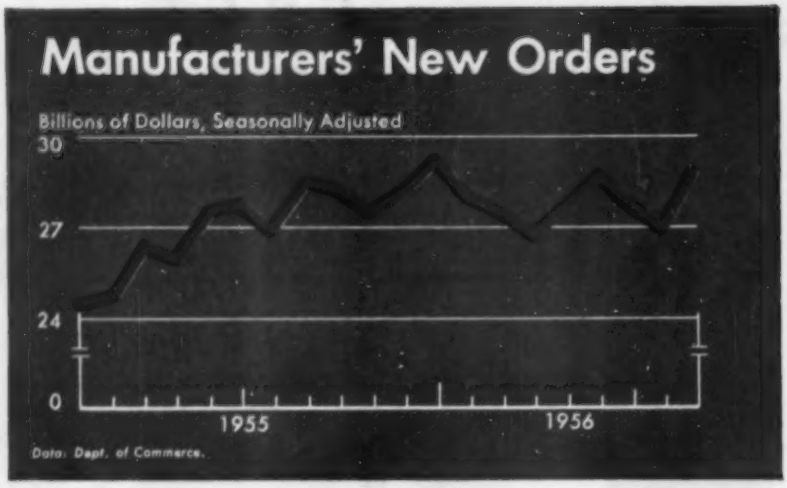


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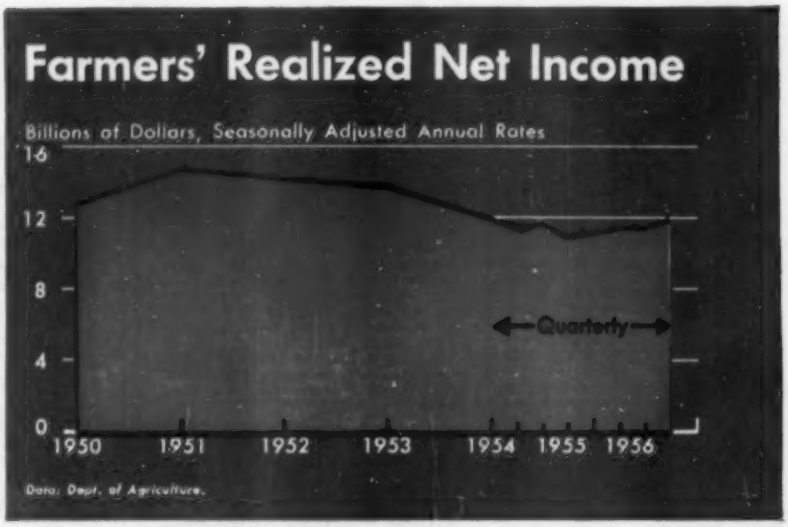
CHARTS OF THE WEEK



Keeping Pace with the Boom

Business activity is likely to maintain its high level for the rest of the year, judging by the rise in new orders placed with manufacturers. After dipping in June and July, the value of these orders rose to $28.9-billion in August after seasonal adjustment. This figure was topped only by last December's $29.2-billion.

Orders for durable goods climbed to $15.1-billion August – the same as in the same month last year – but that was 3% below last December's record $15.6-billion. Nondurables orders rose to $13.8-billion, compared with July's $13.5-billion and $13.6-billion a year ago – but fell below May's $14.1-billion peak.



More Cash in the Pocket

Farmers' incomes are expected to rise in the third quarter, after four years of decline. Income for the first half of 1956 was at the rate of $11.6-billion, and the Agriculture Dept. expects it to go to $12-billion in the third quarter. From 1951 to 1955, farmers' realized net income declined 23.6%, from $14.8-billion to $11.3-billion.

Cash receipts in July and August were up almost 4% from last year, and both prices and marketings were slightly high-

DOW CORNING

SILICONE NEWS

Aid for Maintenance-Weary Plants

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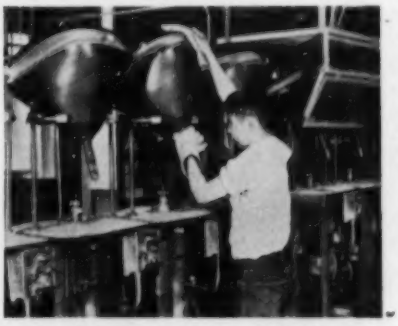
KILLING A BIG HEADACHE—Foam steals valuable production space, breeds costly maintenance problems. During the past decade, Dow Corning silicone defoamers have flattened foam during processing of products ranging from Fudgsicles to auto parts. Now are generally conceded to be the most versatile and efficient foam killers available.



Enter Antifoam B, a new Dow Corning silicone defoamer . . . kills foam with all the deftness of its contemporaries but adds a new measure of convenience. Speedy dispersibility is the important key, as illustrated by the underwater photo above. Other features—ready to use, no delays for diluting or mixing—excellent stability, long storage life—stays uniform even if frozen or boiled. No. 35

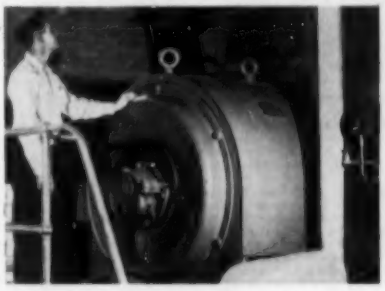
CORROSION BOWS OUT—More and more maintenance engineers plagued by the high cost of finishing and refinishing metal surfaces are standardizing on protective coatings made with Dow Corning Silicones. A typical example: Reynolds Metals Company has found that silicone based aluminum paint lasts at least 8 times longer than a conventional aluminum paint on diesel exhaust stacks where temperatures average 950°F to 1100°F. Consumers, too, want products that stay good looking longer. That's why foresighted appliance manufacturers are trending toward silicone based product finishes. No. 36

LOW COST HIGH VACUUM — When Thomas Electronics began making TV picture tubes, organic oils were used in the 400 high vacuum diffusion pumps on the production line. Opening and closing these pumps 5 times every 8 hours caused rapid evaporation and breakdown of the oils. Result: Carbon deposits required costly, time-consuming cleanings. In 1951 Thomas switched to Dow Corning silicone pump fluids. Maintenance costs were sharply reduced, because semi-inorganic silicone fluids do not break down to form carbonaceous deposits. Thomas also found that oil consumption dropped 30% with silicone fluid. No. 37



SALVE FOR VALVES—Effective at temperatures from —40°F to 500°F and resistant to many chemicals, "Valve Seal," a salve-like silicone compound, protects valve stems from corrosion, seals against leakage of process fluids. Impressed with the freedom-from-maintenance provided by Valve Seal, the Foxboro Valve Co. now offers its well-known "Stabilflo" valves equipped with a lubricator for injecting this versatile Dow Corning silicone lubricant. Other Valve Seal applications — flow meter bearings, pump packings, plug cocks. No. 38

MORE MUSCLES FOR LESS MAINTENANCE—New dimensions of efficiency in electric motors have been



realized through the use of insulating materials made with Dow Corning Silicones. More power per pound and greater reliability are part of the story. Smoother production and lower maintenance costs are additional reasons why silicone insulated electrical equipment is getting the nod from utilities like the Philip Sporn plant on the American Gas and Electric System.

Philip Sporn's first silicone insulated motor, a 1000 hp, 1190 rpm fan motor, has been operating over 4 years in ambient temperatures up to 120°F. Starting against cold air 4 times a day, it is overloaded by 30% bringing its total rise to 250°F with an output of 1300 hp. Built by the Elliott Co., this motor has coils wrapped with "R Tape," made from Silastic*, Dow Corning's silicone rubber. No. 39

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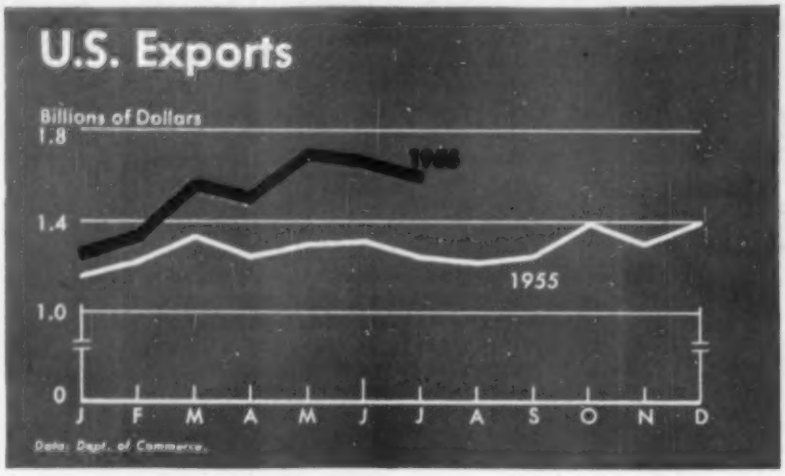
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er than in the same months in 1955. The distribution of incentive payments for wool — totaling $58-million — started in July, and payments of about $250-million to farmers for participation in the soil bank plan will soon begin.

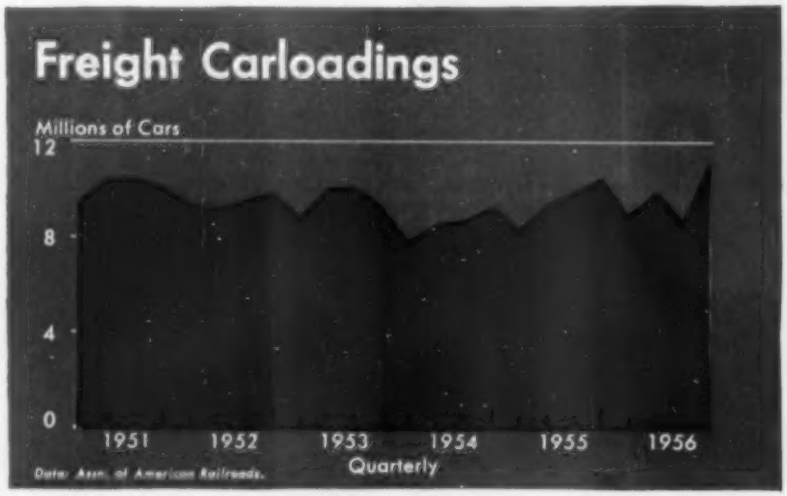


Shipments Abroad Are Up 20%

U.S. exports for the first seven months of 1956 ran 20% ahead of the same period last year. The big rise came from machinery, iron and steel mill products, and coal — reflecting the high level of business activity in foreign countries.

Exports of machinery have also been accelerated by large U.S. investments abroad.

Exports of agricultural commodities also are on the increase after a first-quarter decline.



Picking Up Speed

Railroads are heading into a stepped-up fourth quarter. According to the Assn. of American Railroads, freight carloadings will exceed their year-ago levels by 3.7%. The rise follows an unseasonally low third quarter caused by last summer's steel strike.

Of the 32 principal commodities on which the estimate is based, an increase is expected in the loadings of 24, and a decrease in 8. Ore and concentrates, potatoes, machinery and boilers, citrus fruits, and frozen foods — in that order — will account for the largest increases. Autos, trucks, and agricultural implements will head the declines.

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Moving Toward a United Europe

During a thick Channel fog not so many years ago a London newspaper ran this headline: "Continent Isolated by Fog."

The headline writer was only expressing, in an extreme form, traditional British aloofness toward the Continent—an attitude that has played a large part in Britain's refusal to pay much more than lip service to the postwar movement for European integration.

The British mood, we are glad to note, has suddenly changed, brightening the whole prospect that Western Europe may achieve the kind of economic unity that was the ultimate goal of the Marshall Plan.

In London today there is widespread enthusiasm for the idea that Britain should join with the rest of Western Europe in building—over 10 to 15 years—a huge free trade area (BW—Sep.29'56,p34). This would consist of a central, six-nation Common Market (customs union) and an associated free trade zone that would include Britain and probably the Scandinavian countries. While members of the Common Market would have a single tariff toward the outside world, members of the free trade zone would maintain their individual tariffs against third countries. (Food products would be excluded in both.)

Chancellor of the Exchequer Harold Macmillan and Peter Thorneycroft, president of Britain's Board of Trade, are pushing the idea of free trade with Europe. So are many prominent private citizens, including Sir Oliver Franks, former British ambassador to the U. S. and now chairman of Lloyds Bank.

With this kind of interest in Britain, such Continental leaders as West German Chancellor Adenauer and French Premier Mollet are now confident they can reach agreement to form a Common Market of the six nations that are in the Coal and Steel Community—West Germany, France, Italy, Belgium, Holland, and Luxembourg.

Most of the technical provisions for the Common Market have already been worked out by the experts, including tentative arrangements for a special transitional status for France, the most highly protectionist member of the group. The next step is for the foreign ministers of "The Six" to agree on all this and to O. K. the drafting of a Common Market Treaty. (The six foreign ministers will also be discussing Euratom, the proposed nuclear energy pool.)

If plans materialize for the Common Market and the associated free trade zone, Western Europe would become a free trade area of some 250-million people, with mass markets for modern mass production. Farsighted "Europeans" like France's Jean Monnet, and Americans, too, have had this vision since the early days of the Marshall Plan—only to have their hopes founder on French weakness and British indifference.

Now you have Macmillan pointing, as these men have in the past, to the "advantages of large-scale production which tend in the modern world to be associated with big economic units, such as the U. S. A. and now the U. S. S. R." And Macmillan is arguing, as they have, that "it is the large units which can accumulate and export capital."

The Eisenhower Administration—quite rightly, we believe—has given its blessing to this new movement toward European unity. Part of the present enthusiasm undoubtedly comes from a negative source—frustration over Suez. But the basic drive is clearly a healthy one, deriving its real strength from the rapidly expanding economy of Western Europe—and from the realization, both in Britain and on the Continent, that recent gains can only be held if the area gets together.

For our part, the most encouraging thing is to see the fog lifting between Britain and the Continent.

Warning and Challenge

Results of the University of Michigan Survey Research Center's latest pulse-taking of consumer attitudes (page 171) reinforce a warning that has been implicit in consumer behavior all this year: The consumer is losing some of his enthusiasm. He is no longer an eager and determined buyer of automobiles, houses, and other hardgoods at almost any price and on almost any terms.

This doesn't mean that the business boom is on its last legs or that business faces a buyers' strike.

It does mean that in the coming year anyone who makes a product that he expects to sell to consumers will have to gauge his market accurately. He will have to make something that the customer wants and put a price tag on it that the customer considers fair. If he makes mistakes, he can't count on a blind surge of consumer demand to save him.

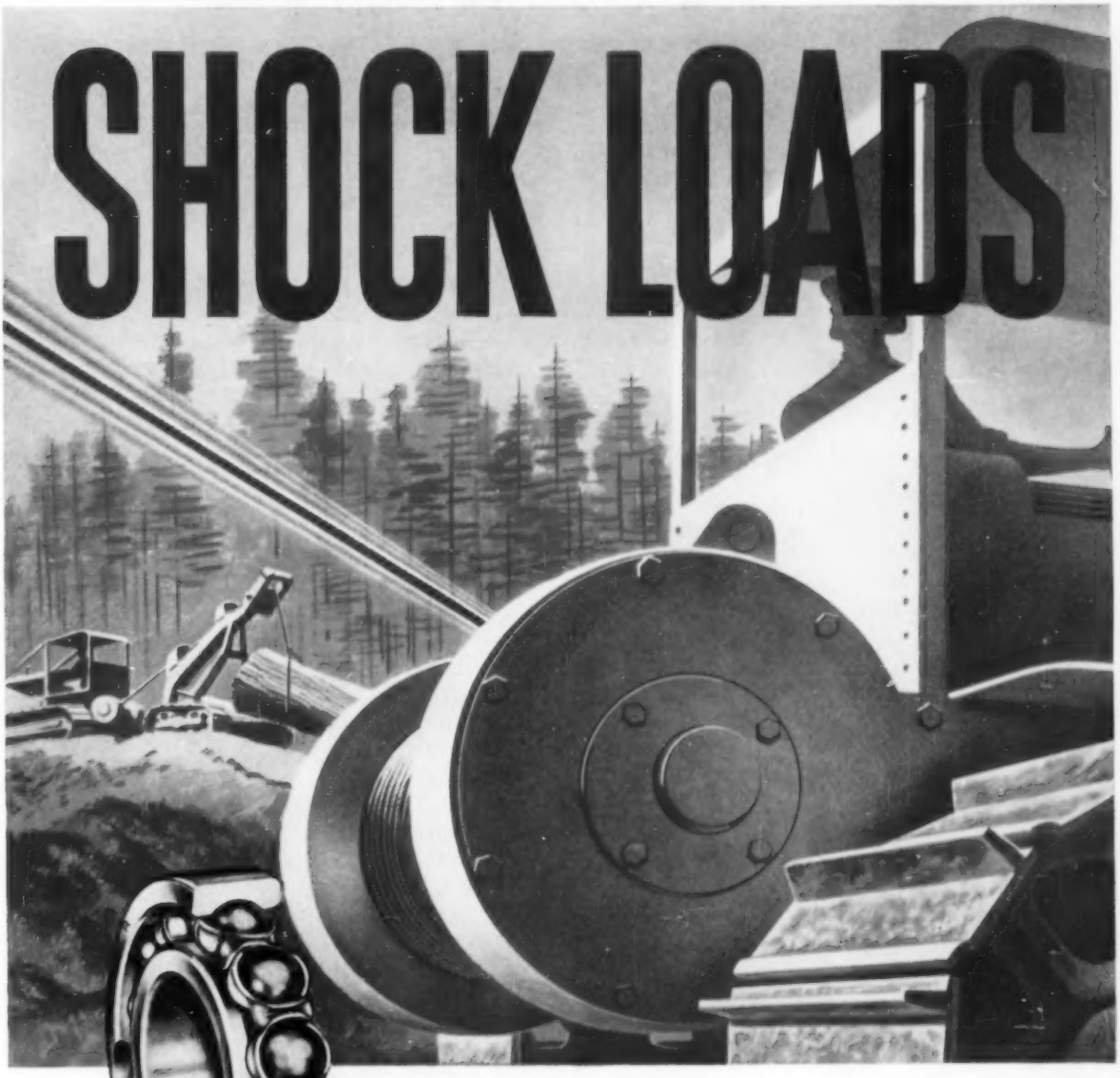
In other words, the coming year promises to be one that puts a particularly high premium on good business judgment and shrewd marketing sense.

This won't worry most businessmen. The capacity of the U. S. economy to make and move goods has been demonstrated too often to leave room for any doubts about it at this time.

In fact, in one way this survey simply throws into a sharper focus something that U. S. consumers always have demanded of U. S. industry. The customers take it for granted that they will be coaxed with more and better goods at fair prices. That is one reason—possibly the main one—that the country has grown the way it has. It's only in unusual times that the consumer fails to demand the earth with a fence around it. And it's only in still more unusual times that he fails to get it.

An attitude and an aptitude for solving bearing problems . . .

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In the tough business of logging, where a towing winch and logging arch can exert a pull of 26 tons or more, and operate in any terrain a tractor can reach, Fafnir Ball Bearings are noted for their capacity to stand rough and tumble shock. The Fafnir maximum capacity ball bearings used in these rugged pieces of ingenious logging machinery are designed with deep races and a greater number of balls, for friction-free operation under punishing loads, and with minimum maintenance.

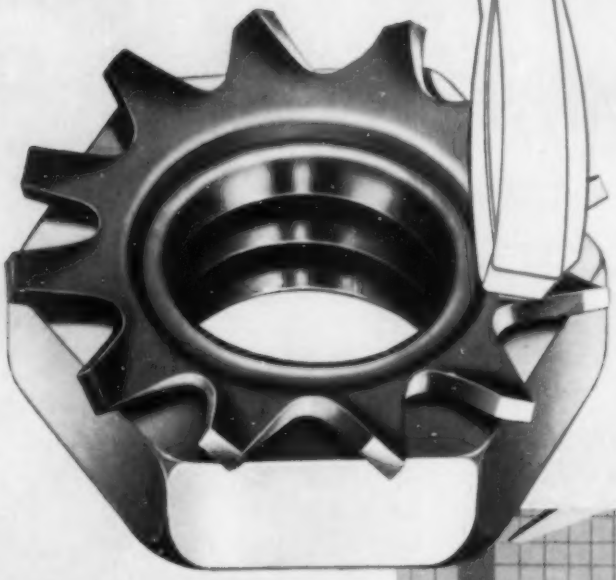
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A new model phonograph created a tough assembly problem. In mounting the tone arm, space limitations would not permit the use of a standard nut and lock washer.

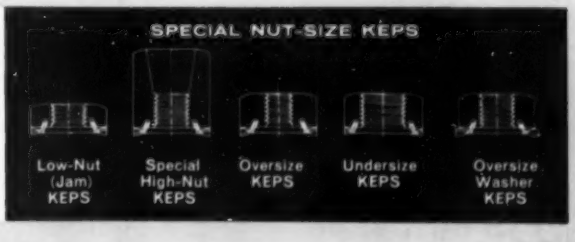
This leading manufacturer called on Shakeproof for a "Fastening Analysis." The result: a special low-height Keps. Not only were space design requirements met, but the Shakeproof Lock Washer added maximum security and strength to a quality record changer. In addition, pre-assembly eliminated the troublesome bottleneck of handling lock washer and nut as two pieces. Now there's only one unit to handle—Keps!

The benefits of a "Fastening Analysis" can be yours. Multiple component problems can often be solved with one ingenious, simple fastener from Shakeproof. Phone or write for a "Fastening Analysis" of your product today.

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